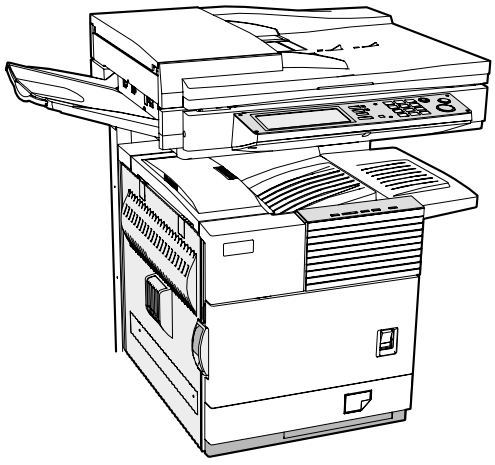
SHARP SERVICE MANUAL

CODE : 00ZARM280UA1E



LASER PRINTER

MODEL AR-M280U/M280N

[1] INTRODUCTION

These models are a modified version of the AR-M350U/M350N, providing a different printing speed.
This Service Manual, therefore, describes only the different points from the AR-M350U/M350N and supplementary items.
For items which are not described in this Service Manual, refer to the following Service Manuals and Parts Guides.

•AR-M350/M450	Service Manual : 00ZARM350/A1E	Parts Guide : 00ZARM450/P1E	Circuit Diagram : 00ZARM350/C1/
•AR-P350/P450	Service Manual : 00ZARP350/A2E	Parts Guide : 00ZAR350LPP1/	Circuit Diagram : 00ZARP350/C1/
•AR-M350U/N•AR-M450U/N	Service Manual : 00ZARM350UA1E		
•AR-NC5J	Service Manual : 00ZARNC5J/A1E		

Note: Depending on the option, additional service documentation may be required.

[2] LIST OF DIFFERENCES FROM AR-M350U/N

A.Product composition

		Model Name	Network Printer Option Model		NIC Standard Model		Note
Base Engine			AR-M350U	AR-M280U	AR-M350N	AR-M280N	
Print Speed			35ppm	28ppm	35ppm	28ppm	
Multi Function Controller		AR-M11	Not Available	Not Available	Standard	Standard	
Multi Function Controller(for U-Model)			Standard	Standard	Not Available	Not Available	No registered as a product
Print Server Card		AR-NC5J	Option	Option	Standard	Standard	
Printer Extension Kit		AR-P14	Option	Option	Standard	Standard	*1
Hardware	MFP-ROM		Only U-type 35/45ppm	Only U-type 28ppm	Only M-type 35/45ppm	Only M-type 28ppm	

*1: Installation of the AR-P14 on U-series machines provides functions equivalent to the M-series machines.

Parts marked with "⚠" are important for maintaining the safety of the machine.
To maintain the safety and performance of the machine, use only the replacement parts specified.

SHARP CORPORATION

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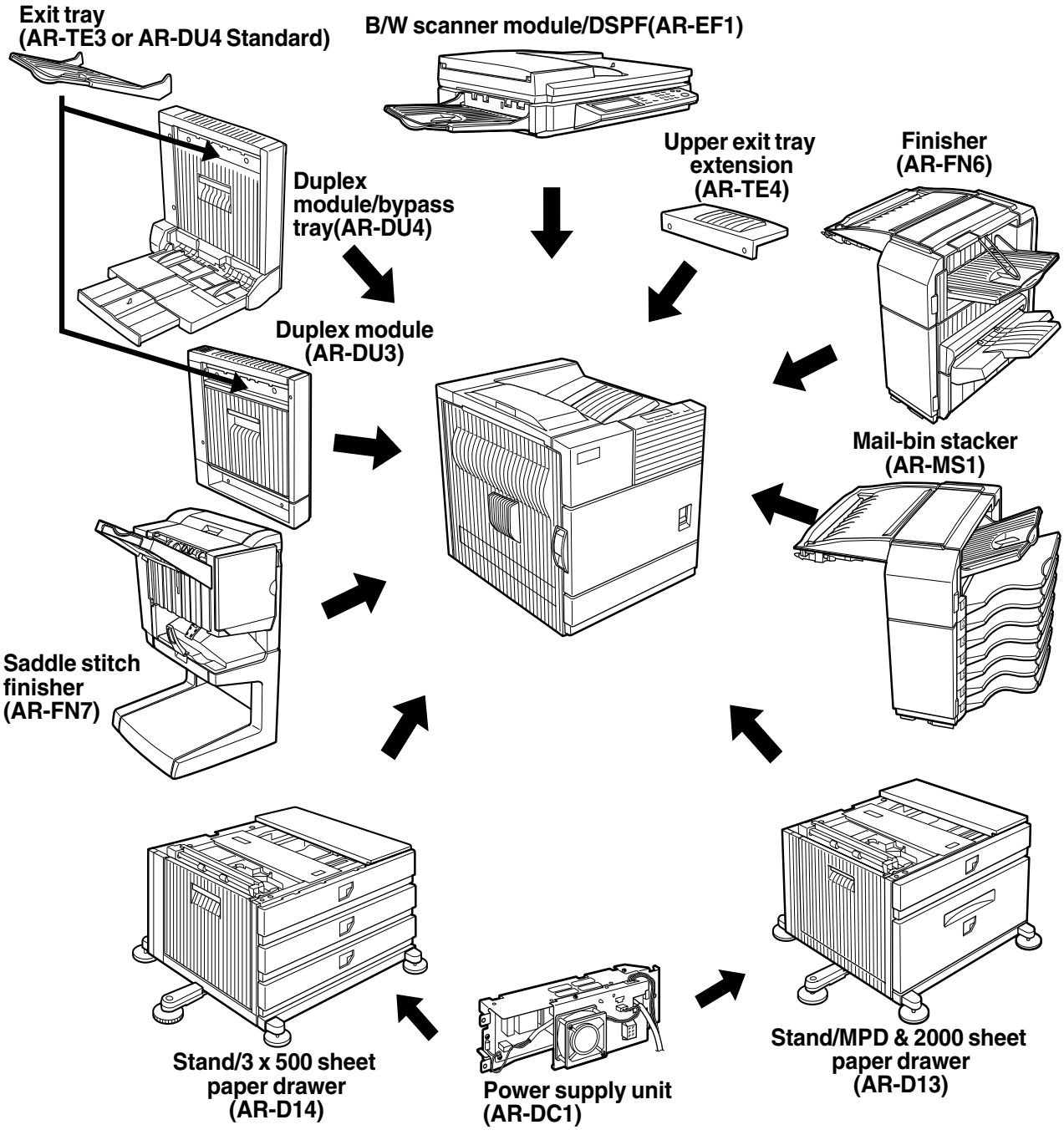
[3] CONFIGURATION

1.System Configurations



2. Standard

Category	Model Name	Other options required for the installation/mounting. (Options must be ordered separately.)	Remarks
MFP model (35ppm)	AR-M350	• B/W Scanner module/DSPF (AR-EF1) • Scanner Rack(AR-RK1) • Stand/MPD&2000 sheet paper drawer (AR-D13) or Three paper drawer stand (AR-D14) • Power supply unit (AR-DC1)	
MFP model (45ppm)	AR-M450		
MFP model (28ppm) (Without network printer function)	AR-M280U		
MFP model (35ppm) (Without network printer function)	AR-M350U		
MFP model (45ppm) (Without network printer function)	AR-M450U		
MFP model (28ppm) (With NIC card (standard))	AR-M280N		
MFP model (35ppm) (With NIC card (standard))	AR-M350N		
MFP model (45ppm) (With NIC card (standard))	AR-M450N		

3. List of combination of peripheral devices

A.AR-M280U

As shown in the table below, some other peripheral devices (B) may be needed for installation of a peripheral device (A) and some peripheral devices cannot be installed together.

			B																					
			B/W scanner module/DSPF	Scanner rack	Stand/3 x 500 sheet paper drawer	Stand/MPD & 2000 sheet	Duplex module/bypass tray	Duplex module	Saddle stitch finisher	Finisher	Mail-bin stacker	Exit tray	Upper exit tray extension	Punch unit	Multi-function controller board	Print server card	PS3 expansion kit	Network scanner expansion kit	Facsimile expansion kit	Fax memory (8 MB)	Power supply unit	Hard disk drive	Network printer kit
	Related for scanner feature																						
A	B/W scanner module/DSPF	AR-EF1	—	○	○*1										○						○		
A	Scanner rack	AR-RK1	○	—	○*1										○						○		
	Related for paper feed unit																						
A	Stand/3 x 500 sheet paper drawer	AR-D14			—	×															○		
A	Stand/MPD & 2000 sheet paper drawer	AR-D13			×	—															○		
A	Duplex module/bypass tray	AR-DU4			○*1		—		×					×							○*2		
A	Duplex module	AR-DU3			○*1			—													○*2		
	Output units																						
A	Saddle stitch finisher	AR-FN7			○*1		×	○	—	×		×	×								○		
A	Finisher	AR-FN6			○*1				×	—	×		×	×							○		
A	Mail-bin stacker	AR-MS1			○*1					×	—		×								○		
A	Exit tray *4	AR-TE3					○*1		×	×	×	—		×									
A	Upper exit tray extension	AR-TE4								×	×		—										
A	Punch unit	AR-PN1			○*1		×	○	○	×		×		—							○		
	Related for extension of functions and others																						
A	PS3 expansion kit	AR-PK1															—						
A	Network scanner expansion kit	AR-NS2	○	○	○*1											○		—					
A	Facsimile expansion kit	AR-FX5	○	○		○*1													—				
A	Fax memory (8 MB)	AR-MM9	○	○		○*1													○	—	○		
A	Power supply unit	AR-DC1				○*1															—		
A	Hard disk drive	AR-HD3																				—	
A	Multi-function controller board *5	AR-M11	○	○		○*1									—								×
A	Print server card *6	AR-NC5J														—							○*1
A	Network printer kit	AR-P14														○							—

○ = Must be installed together.
○*1 = Any of the units must be installed together.
○*2 = Must be installed for installation of the stand/3 x 500 sheet paper drawer or the stand/MPD & 2000 sheet paper drawer.
× = Cannot be installed together.
*3 = Standard
*4 = AR-DU4 Standard
*5 = Attachment of the AR-P14 provides the similar functions.
*6 = Not Available

B.AR-M280N

As shown in the table below, some other peripheral devices (B) may be needed for installation of a peripheral device (A) and some peripheral devices cannot be installed together.

A			B: B/W scanner module/DSPF	Scanner rack	Stand/3 x 500 sheet paper drawer	Stand/MPD & 2000 sheet	Duplex module/bypass tray	Duplex module	Saddle stitch finisher	Finisher	Mail-bin stacker	Exit tray	Upper exit tray extension	Punch unit	Multi-function controller board	Print server card	PS3 expansion kit	Network scanner expansion kit	Facsimile expansion kit	Fax memory (8 MB)	Power supply unit	Hard disk drive	Network printer kit
Related for scanner feature																							
B/W scanner module/DSPF	AR-EF1		—	○	○*1										○						○		
Scanner rack	AR-RK1		○	—	○*1										○						○		
Related for paper feed unit																							
Stand/3 x 500 sheet paper drawer	AR-D14				—	×															○		
Stand/MPD & 2000 sheet paper drawer	AR-D13				×	—															○		
Duplex module/bypass tray	AR-DU4				○*1		—		×					×							○*2		
Duplex module	AR-DU3				○*1			—													○*2		
Output units																							
Saddle stitch finisher	AR-FN7				○*1		×	○	—	×		×	×								○		
Finisher	AR-FN6				○*1				×	—	×		×	×							○		
Mail-bin stacker	AR-MS1				○*1					×	—		×								○		
Exit tray *4	AR-TE3						○*1		×	×	×	—		×									
Upper exit tray extension	AR-TE4									×	×		—										
Punch unit	AR-PN1				○*1		×	○	○	×		×		—							○		
Related for extension of functions and others																							
PS3 expansion kit	AR-PK1																—						
Network scanner expansion kit	AR-NS2		○	○	○*1											○		—					
Facsimile expansion kit	AR-FX5		○	○	○*1														—				
Fax memory (8 MB)	AR-MM9		○	○	○*1														○	—	○		
Power supply unit	AR-DC1				○*1																—		
Hard disk drive	AR-HD3																					—	
Multi-function controller board *3	AR-M11		○	○	○*1										—								
Print server card *3	AR-NC5J															—							
Network printer kit *6	AR-P14																						—

○ = Must be installed together.
○*1 = Any of the units must be installed together.
○*2 = Must be installed for installation of the stand/3 x 500 sheet paper drawer or the stand/MPD & 2000 sheet paper drawer.
× = Cannot be installed together.
*3 = Standard
*4 = AR-DU4 Standard
*6 = Cannot be attached.

[4] SPECIFICATIONS

1. Basic Specification

A. Base Engine

(1) Form

AR-M280U/M280N	Console type

(2) Engine speed

Paper size	AR-M280U/N
A4, 8.5" x 11"	28ppm
A5R/5.5" x 8.5"R	28ppm
B5	28ppm
B4/8.5" x 14	16ppm
A3/11" x 17"	14ppm

(3) Engine composition

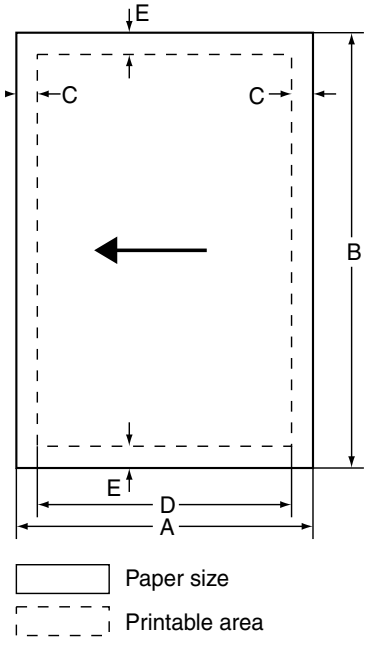
Photoconductor type	OPC (diameter of photoconductor : ø30mm)
Record method	Electrophotograph (laser)
Development method	Dry-type dual-component magnetic brush development
Charge method	Charged saw-tooth method
Transfer method	Transfer roller
Cleaning method	Cleaner blade
Fusing method	Heat roller
Used toner disposal	Toner recycling system

(4) Engine resolution

Resolution	Write :600dpi
Smoothing	Write :1200dpi equivalent
Gradation	Write :2 levels

(5) Printable area

The print area of this product is shown below.



If a printer driver for Windows or Macintosh is used for printing, the printable area will be smaller. The actual printable area depends on the printer driver to be used.

(in mm)

Paper size	A	B	C	D	E
A3	297	420	4	289	4
B4	257	364	4	242	4
A4	210	297	4	202	4
B5	182	257	4	168	4
A5	148	210	4	140	4
Japanese postcard	100	148	4	92	4
Ledger	279	432	4	271	4
Legal	216	356	4	208	4
Foolscap	216	330	4	208	4
Letter	216	279	4	208	4
Executive	184	267	4	183	4
Invoice	140	216	4	132	4
Com-10(envelope)	105	241	4	97	4
C5(envelope)	162	229	4	154	4
Monarch(envelope)	98	191	4	90	4
DL(envelope)	110	220	4	102	4
ISO B5(envelope)	176	250	4	168	4

(6) Warm-up

Warm-up time	less than 80 seconds
Pre-heat requirement	Required
Jam recovery time	Target: about 30 seconds (Under standard condition of 60 seconds left after side cover opening, polygon motor halt)

(7) Power source

Voltage	100V system
	100-127V
Frequency	50/60Hz

(8) Power consumption

Max. Power consumption.	1440W(When MFP full system)

(9) Energy Star benchmark

Low power mode	30W or below
Transition time to low power mode	30min

(10) Noise

At working	less than 6.8B
At waiting mode	less than 5.0B

* Showing noise benchmark in each model as a whole system.

(11) Dimensions

External dimensions (WxDxH)	428x552x469 (Only main unit) (mm) 16.9"x21.7"x18.5"
Occupied space dimensions (WxD)	963x685 (mm) *1 25.7"x22.3"
Weight	AR-M280U:Approx.38.9kg (including developing unit/process/ each controller) Approx.99kg *1 AR-M280N:Approx.39.9kg (including developing unit/process/ each controller/NIC) Approx.100kg *1

*1: With B/W scanner module/DSPF, Scanner rack, Large capacity paper feed desk, Power supply unit and Upper exit tray extension

B. Document Feeding Equipment

(1) One-drawer tray (included in the base engine)

Paper feed method	One-drawer tray	
Sizes to be fed	A4, B5, 8.5" x 11"	
Paper capacity	500 sheets (at 80g/m²)	
Media available for paper feeding	Plain paper 60 - 105g/m², 16 - 28lbs	
Paper type	Plain, recycled, pre-printed, pre-punched, color, letter head	
Paper size switching	To be switched by user (paper size to be entered from the operation panel).	
Dehumidification heater	Not provided	
Balance detection	Provided (paper empty and 3 steps)	
Default size setting	100V system	200V system
	8.5" x 11"	A4
Mounting/dismounting of the tray	Provided	

C. Output Equipment

(1) Face-down Exit Tray (included in the base engine)

Output position/ method	Face-down output at the upper side of main unit
Output paper capacity	400 sheets (80g/m² sheet)
Output paper size	A3, B4, A4, A4R, B5, B5R, A5R 11 " x 17", 8.5" x 14", 8.5" x 13", 8.5" x 11 ", 8.5" x 11 "R, 5.5" x 8.5"R Executive, postal card, Monarch (98 x 191) Com-10 (105 x 241), DL (110 x 220), C5 (162 x 229), ISO B5 (176 x 250)
Spec of media for paper output	Tracing paper : 52 ~ 59g/m² / 14 ~ 15lbs Plain paper : 60 ~ 128g/m² / 16 ~ 34lbs Index paper : 176g/m² / 47lbs Cover paper : 205g/m² / 54 ~ 55lbs Transparency film
Remaining paper detection	Not provided
Exit tray full detection	Provided

2. Specific Function

A. Printer Function

(1) Platform

IBM PC/AT (Include compatible machine) Macintosh (680x0), Power Macintosh, iMac, G3Macintosh

* For Macintosh OS, the PS3 expansion kit and NIC card are required.

(2) Support OS

Custom PS	Windows 95/98/Me/XP
	Windows NT 4.0 Windows 2000
Custom PCL5e/6(XL) SPDL	Windows 95/98/Me/XP
	Windows NT 4.0 Windows 2000
PPD	Windows 95/98/Me/XP
	Windows NT 4.0 Windows 2000
	Mac OS 8.5.1 - Mac OS 9

* For Macintosh OS, the PS3 expansion kit and NIC card are required.

(3) PDL emulation

PCL6, PCL5e compatible, PostScript Level 2, PostScript 3 compatible (PS3 expansion kit is required.)

(4) Print Function

a. General

		When an optional PS3 expansion kit is installed		
Function	PCL5e/ PCL6	PS	PPD (Windows)	PPD (Macintosh)
Copies	1 - 999	1 - 999	1 - 999	1 - 999
Orientation	Yes	Yes	Yes	Yes
Duplex print	Yes	Yes	Yes	Yes
Saddle stitch	Yes	Yes	No	N/A
Binding edge	Left/top/ right	Left/top/ right	Long/short	Long/short
N-up	2/4/6/8	2/4/6/8	2/4*3*4	2/4/6/9/16
N-up direction	Fixed	Fixed	Fixed	Selectable
N-up border line	Yes	Yes	Yes(always)	Yes

b. Paper input

		When an optional PS3 expansion kit is installed		
Function	PCL5e/ PCL6	PS	PPD (Windows)	PPD (Macintosh)
Paper size	Yes	Yes	Yes	Yes
Custom paper size	1 size	1 size	3 sizes*3*5	N/A
Source selection	Yes	Yes	Yes	Yes
Different first page	Yes	Yes	N/A	Yes
Transparency inserts	Yes	Yes	N/A	Yes

c. Paper output

		When an optional PS3 expansion kit is installed		
Function	PCL5e/ PCL6	PS	PPD (Windows)	PPD (Macintosh)
Output tray selection	Yes	Yes	Yes	Yes
Mail bin	Yes	Yes	Yes	Yes
Staple	Yes	Yes	Yes	Yes
Offset	Yes	Yes	Yes	Yes
Punch	Yes	Yes	Yes	Yes

d. Graphic

		When an optional PS3 expansion kit is installed		
Function	PCL5e/ PCL6	PS	PPD (Windows)	PPD (Macintosh)
Resolution	600/300 dpi	600 dpi	600 dpi	600 dpi
Halftone	N/A	Yes	Yes	N/A
Graphic mode	Yes	N/A	N/A	N/A
Smoothing	Yes	Yes	Yes	Yes
Toner save	Yes	Yes	Yes	Yes
Photo enhancement	Yes*8	Yes	N/A	N/A
Negative image	N/A	Yes	Yes	Yes
Mirror image	N/A	Horizontal/ vertical	Horizontal	Yes
Zoom	N/A	N/A	Yes	Yes
Fit to page	Yes	Yes	N/A	N/A

e. Font

		When an optional PS3 expansion kit is installed		
Function	PCL5e/ PCL6	PS	PPD (Windows)	PPD (Macintosh)
Resident font	45 fonts	136 fonts	136 fonts*6	35 fonts
Download font	Bitmap TrueType, Graphic	Bitmap Type1 TrueType	Bitmap Type1 TrueType	N/A

f. Others

		When an optional PS3 expansion kit is installed		
Function	PCL5e/ PCL6	PS	PPD (Windows)	PPD (Macintosh)
Watermark*7	Yes	Yes	Yes	Yes
Overlay	Yes	Yes	N/A	N/A
Job retention*1	Yes	Yes	N/A	Yes
Account control	Yes	Yes	N/A	Yes
Custom settings	Yes	Yes	N/A	N/A
Automatic configuration*2	Yes	Yes	N/A	Yes
Job end notification	Yes	Yes	N/A	N/A

* 1 For models without a hard disk drive, an optional hard disk drive (AR-HD3) must be installed .
* 2 Functions when peripheral devices are installed.
* 3 Not supported in the Windows NT 4.0 environment.
* 4 2/4/6/9/16 is supported in the Windows 2000 environment.
* 5 Only one size is supported in the Windows 2000 environment.
* 6 Only 35 fonts are supported in the Windows NT 4.0 environment.
* 7 This function is limited for PPD.
* 8 PCL6 only

(5) Compatibility

PCL 5e compatibility	Target for PCL5e is to be compatible with HP LaserJet 4000. Small margin difference, rendering difference by different font family, default and transfer function difference are not to be included in the compatibility. All the PJL commands are not necessarily included in the compatibility.
PCL6 compatibility	Target for PCL6 is to be compatible with HP LaserJet 4000. Small margin difference, rendering difference by different font family, default and transfer function difference are not to be included in the compatibility. All the PJL commands are not necessarily included in the compatibility.
PostScript Compatibility	Roman PostScript is targeted to be compatible with Adobe PostScript as performed in HP LaserJet 4000. Small margin difference, rendering difference by different font family, default and transfer function difference are not to be included in the compatibility.

B. Expanded RAM

Installation of additional RAM will provide the following:

1) Time out error reduction
2) Spool time reduction
3) Avoidance of Virtual Memory (VM) error / memory full

Use commercially available RAM with the following specifications.

Note: If RAM used does not meet the follow specifications, the copier may not recognize the additional RAM or its capacity correctly.

<Specification>

DIMM TYPE	168pin 3.3V Unbuffered SDRAM DIMM Non-ECC
DIMM capacity	64MByte, 128MByte, 256MByte
CAS LATENCY	CL=2
SDRAM CLOCK	For PC100, PC133
SPD	Supporting
Parity	Not support
ECC	Not support

<Operation-assured Memory> (As of March / 2001)

Manufacture	Capacity	Model name	RAM CHIP name	Note
Kingston Technology	128MB	KVR133X64C3/128	HYB39S64800BT-7.5	
	128MB	KVR133X64C3-128	D456821G-A75-9JF	
	256MB	KVR133X64C3-256	HY57V28820AT-H	
Viking Components	64MB	VIK8641CL2	µPD456841G5 -A80-9JF	
	64MB	VIK8641CL2	D456841G5-A80-9JF	
	128MB	VIK6642CL2	TC59SM708FT-80	
	128MB	VIK6642CL2	D4564841G5-A80 -9JF	
	256MB	VIK2642CL2	TC59SM708FT-80	
Memory Card Technology	64MB	DM864VS65804X-7G	GM72V66841XT75	
	128MB	DM1665VS65804X-7G	HY57V64820HG	

C. Scanner function

*Scanner function, the NIC card and Network Scanner kit are required.

(1) Scanner function

Scanner mode	Scan to E-mail (Internet FAX) Scan to Server (Client PC)

(2) Support System

Embedded server	SMTP server FTP server
Protocol	TCP/IP

(3) Support Image

Format	TIFF, PDF, TIFF-F * Selectable for each page
Compression method	Uncompressed, G3(1-dimension) *1, G4 *2 *1 G3 (1-dimension) = MH (Modified Huffman) *2 G4 = MMR (Modified MR)

(4) Transmission Mode

DSPF/OC transmission switching	Available (Switching during the reading is not possible)

(5) Image Process

Half tone reproduction	Equivalent to 256 levels
Exposure adjustment	Light / Auto / Dark
Quality selection	Half-tone ON/OFF
Resolution*	Normal (200x200dpi) Fine (300x300dpi) Super fine (400x400dpi) Ultra fine (600x600dpi) Varies with the file type/transmission method

(6) Original Memory

Standard	Commonly use ERDH area of memory.
Memory expansion	Special : As per ERDH memory

(7) Specified Destination

Specified destination	Specifying by one-touch or group
One-touch*	Max. 500 destinations (in conjunction with the one-touch dial of FAX) Max. 100 destinations can be registered for FTP and Desktop.
Group*	To be registered in one-touch
Program	Available

(8) Specified Multiple Destinations

Specified destination	Specifying by one-touch or group
No. of registration	Max. 300 items (in conjunction with those of FAX)
Sequential broadcasting	Available (E-mail only. It is not available for FTP/Desktop.)
Simultaneous FAX transmission	Available (Specifying multiple destinations of FAX, E-mail or FTP and broadcasting by a single scan)

O : Available

(9) Functions

Transmitting functions	Rotating transmission	Available (to be matched with FAX specification)
	Long length original transmission	Not Available
	Verification stamp function	Option
Report/list functions	Transmit/receive record	Available
	Transmit/receive result	Available
	Address/phone directory list	Available
	Group list	Available
	ID/sender list	Available
	Program list	Available

D. Copy function

(1) Copy Speed

	Actual	Reduction	Enlargement
A4, 8.5"x11"	28	28	28
A4R, 8.5"x11"R	20	20	20
A5R, 5.5"x8.5"R, Invoice-R	28	28	28
B5	28	28	28
B5R, Exective-R	20	20	20
B4, 8.5"x14"	16	16	16
A3, 11"x17"	14	14	14
Extra, Envelope	14	14	14
Japan P/C	When printing on post cards, engine speed can vary with system configuration, because each card is fed only after the previous card exits machine.		

* Figures in reduction/enlargement are represented by those at the ratio to show slowest speed

(2) First Copy Time

Conditions: A4 or 8.5"x11"P from front tray of PPC, without HDD and with polygon motor running.

Document glass *1	Less than 5.3 seconds
DSPF	Less than 6.0 seconds

*1 During OC/high-speed mode

(3) Job Speed

S → S *1	27 cpm (97%)
S → D *2	26 cpm (92%)
D → D *3	26 cpm (92%)

*1 S → S : A4 / 8.5" x 11"P original 5 sheets copy 5sets
*2 S → D : A4 / 8.5" x 11"P original 10 sheets copy 5sets
*3 D → D : A4 / 8.5" x 11"P original 5 sheets (10 pages) copy 5sets

Note: First copy time has been factored into calculation resulting in reduced CPM.

(4) Continuous Copy

Max. multiple number	999 pages

(5) Copy Ratio

Copy ratio	AB series : 25%, 70%, 81%, 86%, 100%, 115%, 122%, 141%, 400% Inch series : 25%, 64%, 77%, 100%, 121%, 129%, 400%
Zoom	25 - 400% 25 - 200% (Copy from DSPF)
Independent scaling	Not provided

(6) Exposure/Copy Quality Process

Exposure mode	Binary: Text(auto/manual), Text/photo, Photo 256 levels: Not provided
Manual steps	9 steps
Smoothing	Standard
Toner save mode	Standard

(7) Copy Function

Function	APS	Standard Function
	AMS	Standard Function
	Paper type select	Standard Function (By type setting)
	Auto tray switching	Standard Function
	Rotation copy	Standard Function
	Electronic sort	Standard Function
	Rotation sort	Not provided
	Reserved copy	Standard Function
	Prior tray setting	Not provided
	Recall/register of program	Standard Function
	Proof copy	Not provided
	Preheat function	Standard Function (To be set up by key operator)
	Auto power shut-off function	Standard Function (To be set up by the key operator program)
	Account control	Standard Function (100 accounts)
	Communication support (RIC)	Standard Function
	Card counter support	Only provided the connector
	Coin vendor support	Only provided the connector
Special function	Margin shift	Standard Function
	Edge erase / Center erase	Standard Function
	Dual page copying	Standard Function
	Covers	Not provided
	Transparency insert	Not provided
	Centering	Not provided
	Multi shot (N in 1)	Standard Function (2 in 1 / 4 in 1)
	Pamphlet copy	Standard Function
	2-sided copy orientation change	Standard Function
	Large capacity original mode	0 (Max. 140 pages)
	B/W reverse	Not provided
	Shading	Not provided
	Mirror image	Not provided
	Repeat	Not provided
	Date stamp	Not provided
	Stamp	Not provided
	Page stamp	Not provided
	Zaurus print	Not provided

[5] CONSUMABLE PARTS

1.Supply system table

Note: The consumable parts are the same as those of the AR-M350/M450 series and the AR-P350/P450.

A.USA

NO	Name	Content		Life	Product name	Remark
1	Toner (Black)	Toner(Toner : Net Weight 814g)		27K	AR-450NT (*1 AR-450NT-J)	*Life setup is based on A4 6%
2	Developer	Developer(Developer : Net Weight 450g)		80K	AR-450ND	
3	Drum	Drum	x1	80K	AR-451DR	
4	Maintenance kit 1	Cleaner blade	x1	80K *2	AR-450KC1	
		Drum separation pawl	x4			
		Screen grid	x1			
		Toner reception seal	x1			
		Side molt F	x1			
		Side molt R	x1			
		Charging plate	x1			
5	Maintenance kit 2	Transfer roller	x1	80K	AR-450KA1	
		Discharging plate	x1			
		Paper dust removing unit	x1			
		DV blade	x1			
		DV side seal F	x1			
		DV side seal R	x1			
6	Upper heat roller kit	Upper heat roller	x1	160K	AR-450UH	
		Fusing separation pawl (Upper)	x4			
7	Lower heat roller kit	Lower heat roller	x1	160K	AR-450LH	
		Fusing separation pawl (Lower)	x2			
8	Cleaner blade	Cleaner blade	x10	80K*2(x10)	AR-450CB	Available in the National Parts Center
9	Cleaning roller	Cleaning roller	x10	160K(x10)	AR-450CR	Available in the National Parts Center
		Bearing	x20			
10	Staple cartridge	Staple cartridge	x3	3000x3	AR-SC1	Common with cartridge for AR-FN4 & AR-FN6
11	Staple cartridge	Staple cartridge	x3	5000x3	AR-SC2	Common with cartridge for AR-FN7

*1: For USA

*2: Equivalent to the drum life.

Note1: Print on Master/individual carton:Toner/Developer in 2 languages (English/French), DR in 4 languages (English/French/German/Spanish).
Note2: Packed with machine: DR 80K/Developer UN/Process UN
Note3: The other maintenance parts which are not listed above are registered as service parts.

2.Production number identification

A. Drum cartridge

The lot number, printed on the front side flange, is composed of 10 digits, each digit showing the following content:

1	2	3	4	5	6	7	8	9	10

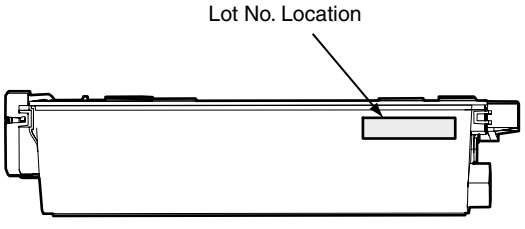
1 Number
For this model, this digit is 2.
2 Alphabet
Indicates the model conformity code. S for this model. (100K/80K drum)
3 Number
Indicates the end digit of the production year.
4 Number or X, Y, Z
Indicates the production month.
X stands for October, Y November, and Z December.
5/6 Number
Indicates the production day on the month.
7 Number or X, Y, Z
Indicates the month of packing.
X stands for October, Y November, and Z December.
8/9 Number
Indicates the day of the month of packing.
10 Alphabet
Indicates the production factory. "A" for Nara Plant.

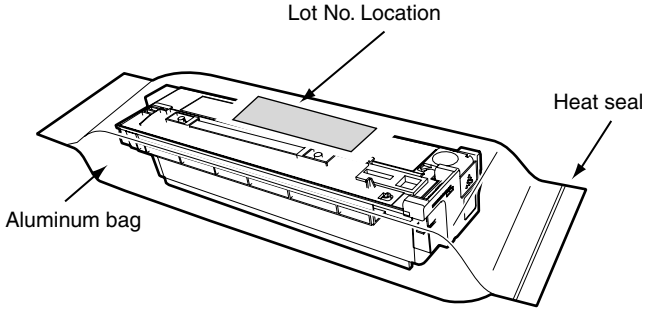
B. Toner cartridge

The lot number is composed of 7 digits, and each digit indicates as following.
The lot number shall is printed in the position shown below.

1	2	3	4	5	6	7

1 Version number (A - sequentially revised)
2 Numeral figure
Indicates the end digit of the production year.
3 Alphabet
Indicates the production factory. (B for SOCC)
4 Destination code
5,6 Numeral figures
Indicates the production day.
7 Numeral figure or X, Y, Z
Indicates the production month.
X stands for October, Y November, and Z December.





C. Developer

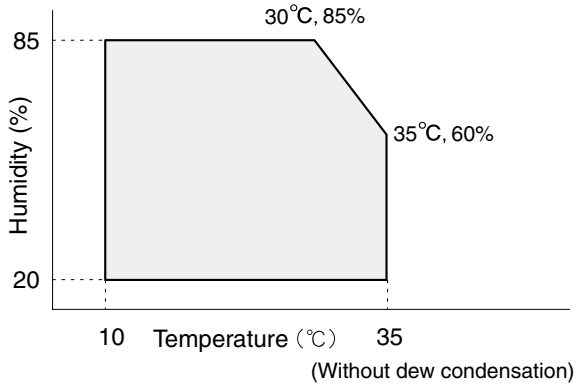
The lot number is composed of 8 digit, and each digit indicates as following.
The lot number shall be printed on the bag.

1	2	3	4	5	6	7	8

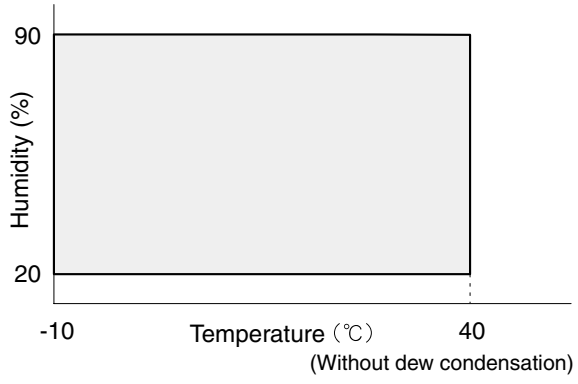
1 Alphabet
Indicates the production factory.
2 Figure
Indicates the production year.
3/4 Figure
Indicates the production month.
5/6 Figure
Indicates the production day.
7 Hyphenation
8 Figure
Indicates the production lot.

3. Environmental conditions

A. Operating conditions

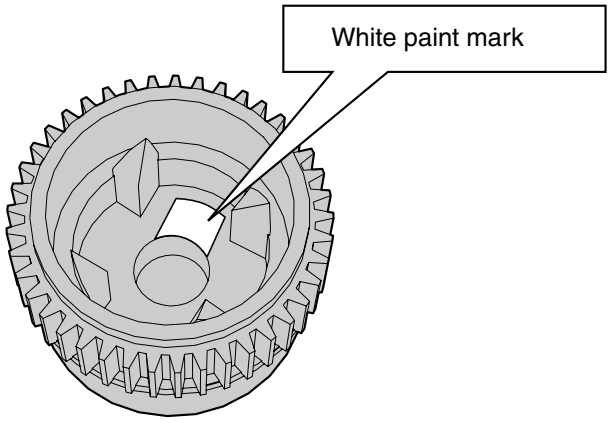


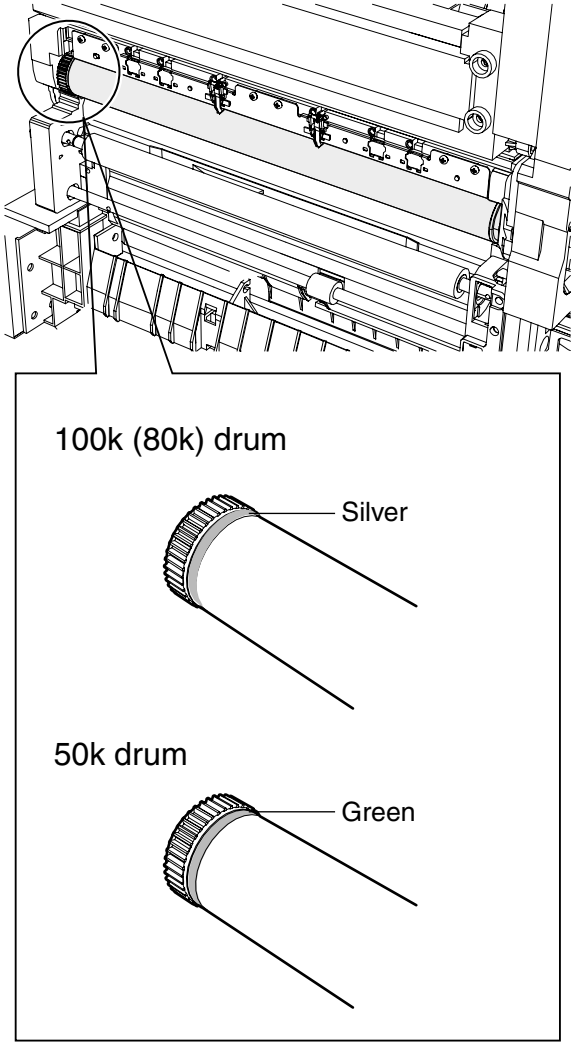
B. Storage conditions



4.Different point of 50K drum and 80K drum

		50K drum	80K drum
1	Marking	No mark on Flange	White paint mark on rear side of Flange
2	Lot number	2 digit : [T]	2 digit : [S]
3	Flange assembly direction	Painting upper limit : F side	Painting upper limit : R side
4	Color band on Drum	Green	Silver



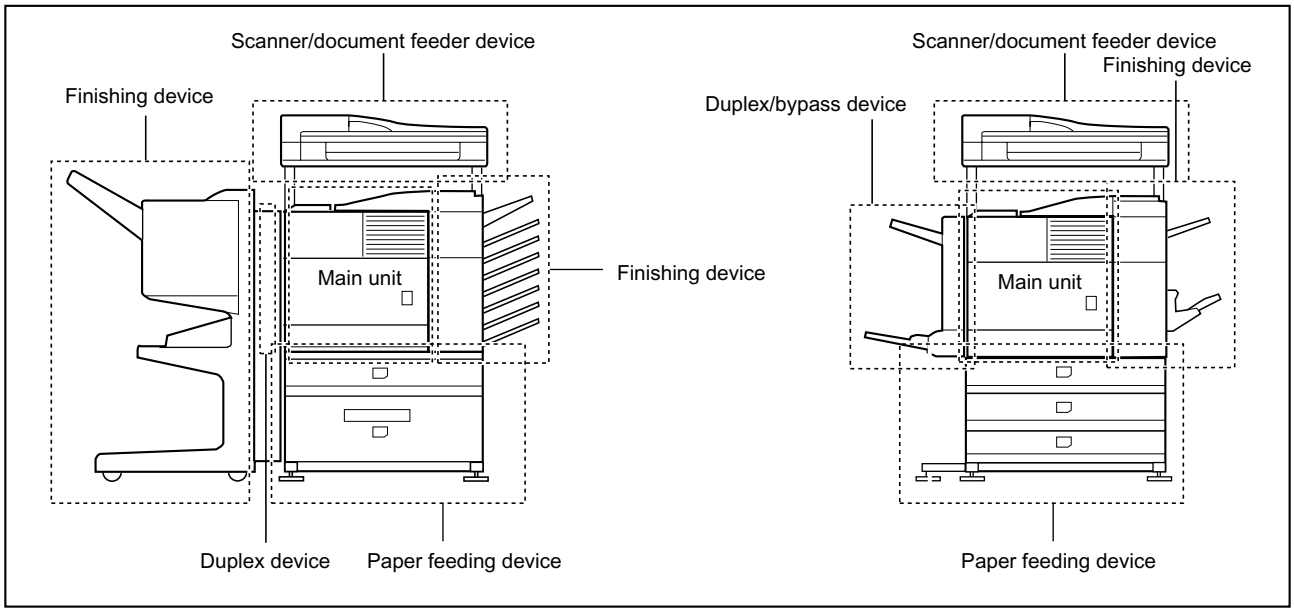


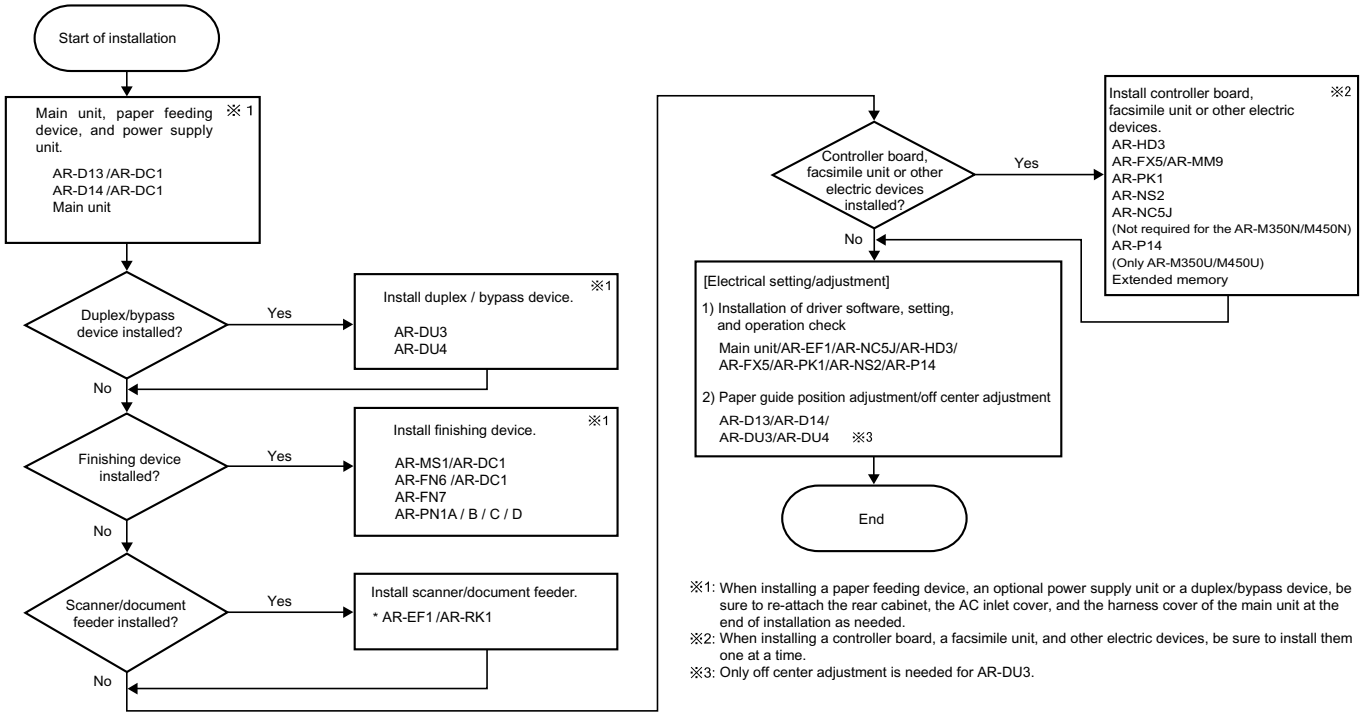
[6] UNPACKING AND INSTALLATION

1. Installing procedure flowchart

There are many combinations between this machine and option units. For installing option units, observe the following procedures for efficiency.

To install the devices efficiently, follow the procedure below.
Some peripheral devices may have been installed as standard devices depending on the main unit model.
Part of descriptions and illustrations may be different.





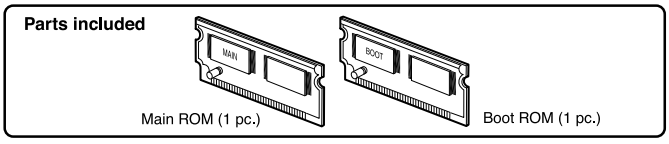
※1: When installing a paper feeding device, an optional power supply unit or a duplex/bypass device, be sure to re-attach the rear cabinet, the AC inlet cover, and the harness cover of the main unit at the end of installation as needed.
※2: When installing a controller board, a facsimile unit, and other electric devices, be sure to install them one at a time.
※3: Only off center adjustment is needed for AR-DU3.

* When installing an option, refer to the Service Manual for that option and or the AR-M350 / M450 Service Manual.

2. AR-P14 installing procedure

<Before installation>

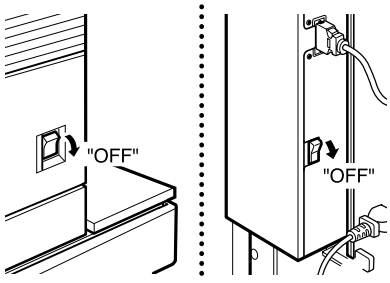
* This installation procedure is provided for use with the AR-M280U / M280N and AR-M350U / M450U series.
* To connect this machine to a network, a Print Server Card (NIC) AR-NC5J must be installed to the multi-function controller board in advance.



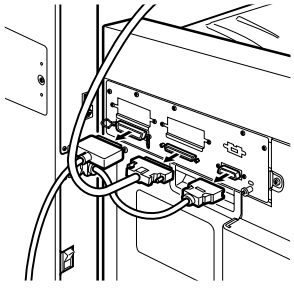
* To enable the printer expansion function, the product key must be acquired.

The application number, machine serial number, and product key number are important information.
Keep the above information for future reference.

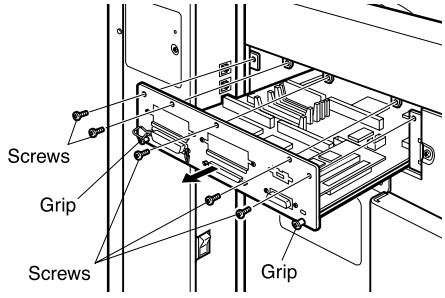
1) Mount the printer expansion kit ROMs to the control PWB.
<1>Turn off the main switch of the main unit of the printer
Turn the main switch located on the front side of the main unit to the "OFF" position.
If the machine is equipped with a facsimile unit, also turn off the FAX power switch.
Then remove the power plug from the outlet.
.



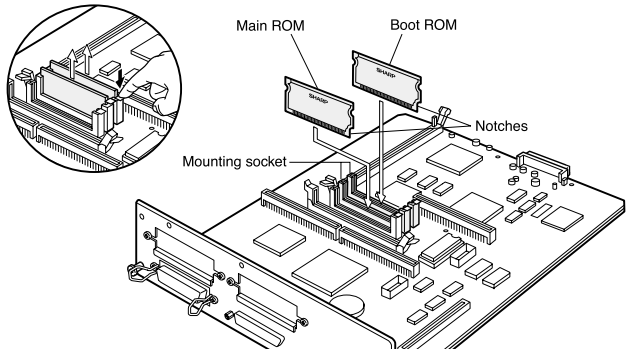
<2>Remove the cables connected to the control PWB unit.
Remove all the cables connected to the control PWB unit of the main unit of the printer.



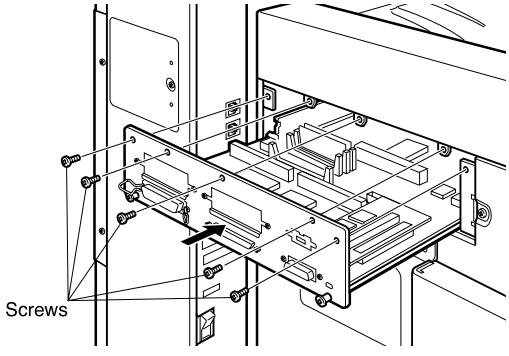
<3>Remove the control PWB unit.
Remove the five screws that fix the control PWB unit to the main unit of the printer.
Then, hold the two grips and pull out the control PWB unit to remove it from the main unit.



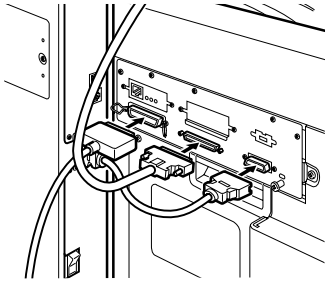
<4>Mount the printer expansion kit ROMs(2 pcs.)to the control PWB.
Remove the ROMs(main and boot ROMs)from the control PWB and replace them with the two ROMs(main and boot ROMs)of the printer expansion kit.
The main and boot ROMs are indicated with "MAIN" and "BOOT" on the labels on the ROMs respectively.
When mounting the printer expansion kit ROMs, insert them to the same positions in the same direction as those before replacement and ensure that the inserted printer expansion kit ROMs are locked with the fittings of the sockets.



<5>Re-attach the control PWB.
Attach the control PWB to the main unit of the printer and fix it using five screws.

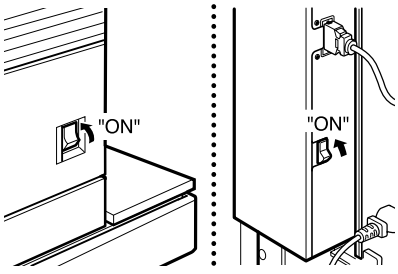


<6>Connect the cables to the control PWB.
Connect all the cables that have been removed in <2> to the original positions of the control PWB unit.



If another peripheral device must be installed, carry out the following steps at the end of the installation work.

2) Turn on the main switch of the main unit of the printer.
Insert the power plug of the main unit of the printer to the outlet.
Then, turn the main switch located on the front side of the main unit to the "ON" position.
If the machine is equipped with a facsimile unit, turn on the FAX power switch.



3) Prepare to enable the printer expansion function.
To enable the printer expansion function, use the keys on the operation panel to enter the product key.
For entry of the product key, see the key operator's guide of the operation manual for the main unit.

Carry out the network setting for the Print Server Card.
Use a key operator program to carry out the network setting for this machine. For this network setting, the customer's network environment must be checked. Consult the network administrator to carry out the setting.

In addition to the network setting for this machine, to use the machine in the network environment:
According to the customer's network environment, install the driver software from the CD-ROM supplied with this machine and use the utility software supplied with the Print Server Card to set the network printer for the server computer.
For installation in the server computer and network setting, see the operation manual supplied with the main unit.
This setting must be carried out by the network administrator or based on consultation with the network administrator.

4) To check the operation of the printer expansion function.
When the network settings and the driver settings are complete, perform a test print to check if printing can be performed successfully.
(When test printing is completed successfully, use the "list print" key operator program to print the network settings and keep the printout for future reference.)

Installation of AR-P14 is now complete.

[7] MAINTENANCE

1. Self print of set values

Use SIM 22-6 to print the set values (machine settings) and jam history.
These values must be printed before execution of maintenance or disassembly procedures.

2. Maintenance System Table

The maintenance items and positions are the same as those of the AR-M350 series. However, the maintenance cycle differs.

A. Scanner / DSPF

Maintenance cycle : 80K

X Check (Clean, replace, or adjust as necessary.) O Clean ▲ Replace △ Adjust ☆ Lubricate ☐ Move position

Unit name	Part name		When calling	80k	160k	240k	320k	Remark
Optical section	Mirror/Lens/Reflector/Sensors		O	O	O	O	O	
	Table glass/OC		O	O	O	O	O	
	White reference sheet		O	O	O	O	O	
	Rails			☆	☆	☆	☆	
	Drive belt/Drive wire/Pulley			X	X	X	X	
DSPF	Paper feed section	Take-up roller	O	▲	▲	▲	▲	Note 1
		Separation pad	O	▲	▲	▲	▲	Note 1
		Paper feed roller	O	▲	▲	▲	▲	Note 1
	Transport section	PS roller	O	O	O	O	O	
		Exposure section (Dust-proof glass)	O	O	O	O	O	
	Paper exit section	Paper feed roller SPF	O	O	O	O	O	
	Other	Sensors		O	O	O	O	For cleaning, blow air.
	Finish stamp section [Option] (Japan only)	Stamp solenoid					▲	
		Stamp individual part	X	X	X	X	X	User replacement at 10K or 1 year.

Note 1: Replacement reference: Same as above or 2 years.

B. Engine section

* For disassembly procedures, refer to the AR-P350/P450 Service Manual.

Maintenance cycle : 80K

O Check (Clean, replace, or adjust as necessary.) X Clean ▲ Replace △ Adjust ☆ Lubricate ☐ Move position

Unit name	Part name	When calling	80k	160k	240k	320k	Remark
Drum peripheral	Drum		▲	▲	▲	▲	Installed when shipping
	Cleaner blade		▲	▲	▲	▲	
	Toner reception seal		▲	▲	▲	▲	
	Side molt		▲	▲	▲	▲	
	Transfer roller	X	▲	▲	▲	▲	
	Discharge plate	X	▲	▲	▲	▲	
	TR bearing (F/R)		X	X	X	▲	
	After-transfer star ring		X	X	X	▲	
	TR gear	X	X	▲	X	▲	
	Screen grid	(O)X	▲	▲	▲	▲	
	Drum separation pawl UN		▲	▲	▲	▲	
	Charger case (M/C)		O	O	O	O	
	Charging plate (saw teeth)	(O)X	▲	▲	▲	▲	
Developing section	Developer		▲	▲	▲	▲	Supplied when installing
	DV blade		▲	▲	▲	▲	
	DSD collar		O	O	O	O	
	DV side seal F		▲	▲	▲	▲	
	DV side seal R		▲	▲	▲	▲	
	Toner cartridge						Attached when installing./ EX Japan: 814g, user replacement for every 27K.
Fusing section	Upper heat roller		O	▲	O	▲	
	Lower heat roller		O	▲	O	▲	
	Upper separation pawl		X	▲	X	▲	
	Lower separation pawl		X	▲	X	▲	
	Thermistor		X	X	X	X	Clean and remove paper dust.
	Upper heat roller gear		X	▲	X	▲	
	Paper guides	O	O	O	O	O	
	Gears		☆	☆	☆	☆	
	Cleaning roller		X	▲	X	▲	
	CL roller collar			▲		▲	
Filters	Ozone filter		▲	▲	▲	▲	
Paper feed section	Paper feed roller	O	X	X	X	X	Note 2
	Torque limiter	X	X	X	X	X	Note 2
Transport section Paper exit reverse section	PS follower roller	O	O	O	O	O	
	Transport rollers	O	O	O	O	O	
	Transport paper guides	O	O	O	O	O	
	Paper dust remover		▲	▲	▲	▲	
Drive section	Gears	☆	☆	☆	☆	☆	(Specified position)
	Belts				X		
Image quality		X	X	X	X	X	
Other	Sensors		X	X	X	X	

Note 2: Replacement reference: Use the counter value of each paper feed port as the replacement reference.
Paper feed roller/Torque limiter section: 80K or 2 years

C. Peripheral devices

Maintenance cycle : 80K

O Check (Clean, replace, or adjust as necessary.) X Clean ▲ Replace △ Adjust ☆ Lubricate ☐ Move position

Option name	Part name		When calling	80k	160k	240k	320k	Remark
ADU + Manual feed	Paper feed separation section	Paper feed rollers	(O)X	X	X	X	X	Note 3
		Separation pad	(O)X	X	X	X	X	Note 3
		Torque limiter	(O)X	X	X	X	X	Note 3
	Transport section	Transport rollers	O	O	O	O	O	
		Transport paper guides	O	O	O	O	O	
	Drive section	Gears	☆	☆	☆	☆	☆	(Specified position)
		Belts				X		
	Other	Sensors	X	X	X	X	X	
Desk (Multi stage LCC) Multi purpose	Paper feed separation section	Paper feed rollers	(O)X	X	X	X	X	Note 3
		Torque limiter	(O)X	X	X	X	X	Note 3
	Transport section	Transport roller	O	O	O	O	O	
		Transport paper guides	O	O	O	O	O	
	Drive section	Gears	☆	☆	☆	☆	☆	(Specified position)
		Belts				X		
	Other	Sensors	X	X	X	X	X	
Finisher	Transport section	Transport rollers	O	O	O	O	O	
		De-curler roller	(O)X	X	X	X	X	
		Transport paper guides	O	O	O	O	O	
	Drive section	Gears	☆	☆	☆	☆	☆	(Specified position)
		Belts				X		
	Other	Sensors	X	X	X	X	X	
		Discharge brush	X	X	X	X	X	
	Staple unit							Replace Unit at 100K staple.
	Staple cartridge							User replacement for every 3000pcs.
Mail-bin stacker	Transport section	Transport roller	O	O	O	O	O	
		Transport paper guides	O	O	O	O	O	
	Drive section	Gears	☆	☆	☆	☆	☆	(Specified position)
		Belts				X		
	Other	Sensors	X	X	X	X	X	
		Discharge brush	X	X	X	X	X	
Saddle finisher	Transport section	Transport roller	O	O	O	O	O	
		Transport paper guides	O	O	O	O	O	
	Drive section	Gears	☆	☆	☆	☆	☆	(Specified position)
		Belts				X		
	Other	Sensors	X	X	X	X	X	
		Discharge brush	X	X	X	X	X	
	Staple Unit							Replace Unit at 100K staple (including the staple UN and the holder section).
	Staple cartridge							User replacement for every 5000 pcs.

Note 3: Replacement reference: Use the counter value of each paper feed port as the replacement reference
Paper feed roller / Torque limiter section: 80K or 2 years

[8] ADJUSTMENTS

1. Process section

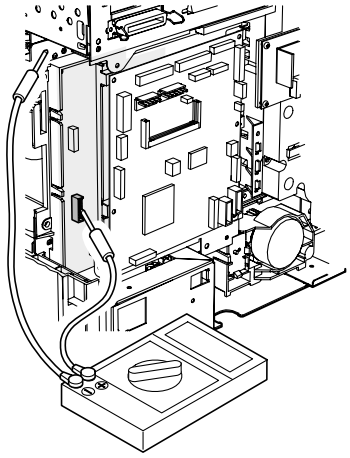
A. High voltage output adjustment

(1) Developing bias output check and setup

1) Remove the rear cabinet to allow checking of the high voltage monitor output pin.
2) Execute the simulation of the target high voltage. (See the table below.)
3) Select the mode to be set with 10-key, and press START key.
4) Enter the set value with 10-key and press START key. The set value is outputted for 30 sec.
5) Apply a high voltage tester between the measurement pin and the frame.

Note: Take care not to short the measuring pin to the frame.

6) The unit stops after 30 sec of output.



			Default		Set range	Measurement pin	High voltage probe impedance
			Monitor output voltage	Set value			
MC grid MAIN GRID (SIM 8-2)	AUTO	AE mode	-650V±5V	645	200~900	CN2-7	100MΩ
	CHARACTER	Text mode	-650V±5V	645	200~900		
	MIX	Text/Photo mode	-650V±5V	645	200~900		
	PHOTO	Photo mode	-650V±5V	645	200~900		
	PRINTER	Printer mode	-650V±5V	645	200~900		
	FAX	Fax mode	-650V±5V	645	200~900		
Transfer current THV+ (SIM 8-6)	FRONT	Front		45PPM : 267 28/35PPM : 220	0~620		
	BACK	Back		45PPM : 310 28/35PPM : 267	0~620		
Developing bias DV BIAS (SIM 8-1)	AUTO	AE mode	-500V±5V	485	0~745	CN2-1	100MΩ
	CHARACTER	Text mode	-500V±5V	485	0~745		
	MIX	Text/Photo mode	-500V±5V	485	0~745		
	PHOTO	Photo mode	-500V±5V	485	0~745		
	PRINTER	Printer mode	-500V±5V	485	0~745		
	FAX	Fax mode	-500V±5V	485	0~745		
	PLUS	Positive bias	+150V±5V	150	0~255		
Separation voltage SHV (SIM 8-17)	FRONT	Front	+1.25V±0.1V	45PPM : 160 28/35PPM : 120	0~375	CN2-3	10MΩ
	BACK	Rear	+1.25V±0.1V	45PPM : 160 28/35PPM : 120	0~375		
Transfer voltage THV (SIM 8-17)			-800V±10V	780	0~1250	CN2-5	10GΩ

2. Engine section

A. Resist quantity setup

•This adjustment requires a high level of accuracy.
We recommend using the default setting.

This adjustment is performed in the following cases:
•When the void quantity is changed by the paper feed tray.
•When paper is skewed.

Complete the following adjustments before performing resist quantity setup.
•LSU right angle adjustment
•Print magnification ratio adjustment
•Print off-center setup
•Void area setup

1) Execute SIM 51-2.
2) Adjust the resist quantity so that paper transport is stable.

<Factory setup value>

45PPM	BPT	55
	T1	60
	T2	50
	DESK	50
	ADU	50
28/35PPM	BPT	60
	T1	65
	T2	55
	DESK	55
	ADU	55

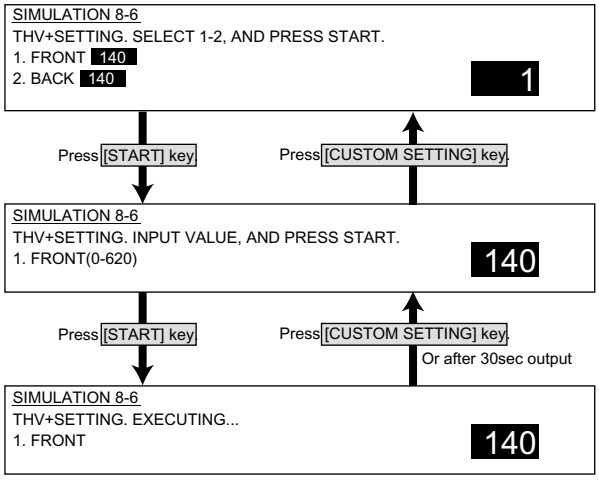
[9] SIMULATION

The following simulations have been changed.

Main code 8

8-6

Purpose	Adjustment
Function (Content)	Used to check and adjust the transfer charger current and its control circuit.
Section	Process (OPC drum, developing, transfer, cleaning)
Item	
Operation/Procedure	Enter the output value to be adjusted with 10 digit key pad. The current set value is highlighted at the right of each item. After entering the value with 10 digit key pad, press START key. The output is made for 30sec at the set value. Then the output is stopped.

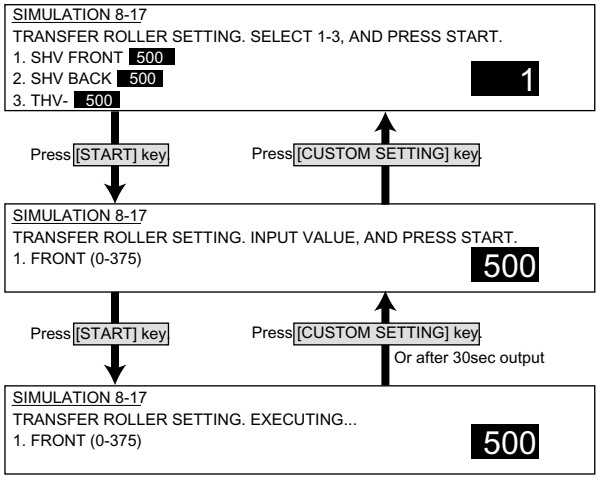


<List of display value>

			Default	Set range
1	Cassette/manual paper feed	45PPM	267	0 ~ 620
		28/35PPM	220	
2	Paper feed from ADU	45PPM	310	
		28/35PPM	267	

8-17

Purpose	Operation test, check
Function (Content)	Used to set and check the transfer roller output.
Section	Process (OPC drum, developing, transfer, cleaning)
Item	Operation
Operation/Procedure	Enter the output value to be adjusted with 10 digit key pad. The current set value is highlighted at the right of each item. After entering the value with 10 digit key pad, press START key. The output is made for 30sec at the set value. Then the output is stopped.



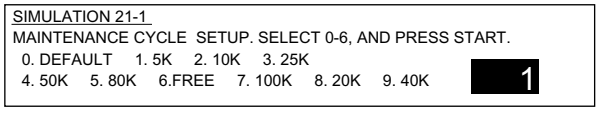
<List of set values>

		Default	Set range
1	SHV front surface	160(45PPM) 120(28/35PPM)	0 ~ 375
2	SHV back surface		
3	THV-output	780	0 ~1250

Main code 21

21-1

Purpose	Setup
Function (Content)	Used to set the maintenance cycle.
Section	
Item	Spec
Operation/Procedure	Used to set the maintenance cycle in an SRU machine.


SIMULATION 21-1
MAINTENANCE CYCLE SETUP. SELECT 0-6, AND PRESS START.
0. DEFAULT 1. 5K 2. 10K 3. 25K
4. 50K 5. 80K 6.FREE 7. 100K 8. 20K 9. 40K
1

<List of set values>

0	Maintenance display at the cycle of each control spec.
1	Maintenance display at 5K
2	Maintenance display at 10K
3	Maintenance display at 25K
4	Maintenance display at 50K
5	Maintenance display at 80K
6	No maintenance display
7	Maintenance display at 100K
8	Maintenance display at 20K
9	Maintenance display at 40K

Main code 44

44-1

Purpose	Setup
Function (Content)	Used to set Enable/Disable of each correction operation in the image forming (process) section.
Section	Process (OPC drum, developing, transfer, cleaning)
Item	Operation
Operation/Procedure	

SIMULATION 44-1
PROCESS CORRECTION VALUE SETTING. INPUT VALUE 0-255 AND PRESS START.
BIT0:Vg1, BIT1:Vg2, BIT2:Vb1, BIT3:Vb2
BIT4:Vb3, BIT5:LD1, BIT6:LD2
BIT7:EX
255

bit = 1 : Correction enabled

Bit	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
	0	0	0	0	0	0	0	0	EX	LD2	LD1	Vb3	Vb2	Vb1	Vg2	Vg1

44-4

Purpose	Setup
Function (Content)	Used to set the target image (reference) density level in the developing bias voltage correction.
Section	Process (OPC drum, developing, transfer, cleaning)
Item	Data
Operation/Procedure	The process correction value is set. Select an item (1 - 9), and enter a value with 10 digit key pad. Press START to store the value.

SIMULATION 44-4
PROCESS CONTROL VALUE SETTING. SELECT 1-8 AND PRESS START.
1.PTH 00 2.S-WT 100
3.Vb1-1 50 4.Vb1-2 50 5.Vb1-3 50
6.Vb2-1 50 7.Vb2-2 50 8.Vb2-3 50
1

Press [START] key.

Press [CUSTOM SETTING] key.

SIMULATION 44-4
PROCESS CONTROL VALUE SETTING. INPUT VALUE, AND PRESS START.
1.PTH
45

<List of display values>

1	PTH *1	Process Thermistor temperature forcible set value (0-99°C : Normal 0)
2	S_WT *2	Vb (Developing bias correction value) rising correction wait time (0-180sec : Default 90)
3	Vb1-1 *3	Vb (Developing bias correction value) correction quantity (First rotation) 1 (0 - 150V : Default 50)
4	Vb1-2 *3	Vb (Developing bias correction value) correction quantity (First rotation) 2 (0 - 150V : Default 50)
5	Vb1-3 *3	Vb (Developing bias correction value) correction quantity (First rotation) 3 (0 - 150V : Default 50)
6	Vb2-1 *4	Vb (Developing bias correction value) correction quantity (Second rotation) 1 (0 - 50V : Default 15)
7	Vb2-2 *4	Vb (Developing bias correction value) correction quantity (Second rotation) 2 (0 - 50V : Default 15)
8	Vb2-3 *4	Vb (Developing bias correction value) correction quantity (Second rotation) 3 (0 - 50V : Default 15)

*1: Only when this value is 0, control is performed with the actual measurement value of process Thermistor.
If it is not 0, control is forcibly performed.

*2: When the drum motor standby time is greater than this value, the correction of SIM 44-1 Vb1 is performed.

*3: This value is SIM 44-9 Vb1-1 correction value. The value corresponding to the drum rotating time is used.

*4: This value is SIM 44-9 Vb1-2 correction value. The value corresponding to the drum rotating time is used.

DRUM ROTATION TIME			Vb1 correction value (X' th rotation)
45PPM	35PPM	28PPM	
0 ~ 40K (sec)	0 ~ 50K (sec)		(X' th rotation) -1
40 ~ 80K (sec)	50 ~ 95K (sec)		(X' th rotation) -2
80K ~ (sec)	95K ~ (sec)		(X' th rotation) -3

44-9

Purpose	Adjustment, setup, operation data output, check (display)
Function (Content)	Used to check the result (main charger grid voltage developing bias voltage, laser power, etc.) of correction (process correction) in the image forming section. (By this simulation, the correction operation can be checked.)
Section	Process (OPC drum, developing, transfer, cleaning)
Item	Data
Operation/Procedure	The process correction value is checked.

SIMULATION 44-9
PROCESS CONTROL DATA DISPLAY.
DRUM ROTATION TIME: 01234567 (sec)
Vg1: 30 (V) Vg2: 30 (V)
Vb1-1: 30 (V) Vb1-2: 30 (V) Vb2: 10 (V)
LD1: 0.05 (mW) LD2: 0.05 (mW)
CONTROL: 1 DESTINATION: A PTH: 30 (deg)
TO: -5 T1: -5 T2: -3

<List of display values>

DRUM ROTATION TIME	Drum rotation time
Vg1~Vg2	Grid voltage correction value
Vb1-1 *1	Vb (Developing bias correction value) correction value (first rotation)
Vb1-2 *1	Vb (Developing bias correction value) correction value (second rotation)
Vb2	Developing bias correction value
Vb3	Developing bias correction value
LD1	Laser power correction value
LD2	Laser power correction value
CONTROL	CRUM control spec (1 - 3)
DESTINATION	CRUM destination (A - L)
PTH *2	Process Thermistor temperature value
T0	Toner control correction value (Rotation time correction) (±100)
T1	Toner control correction value T1 (Temperature correction) (±100)
T2	Toner control correction value T2 (Temperature correction) (±100)

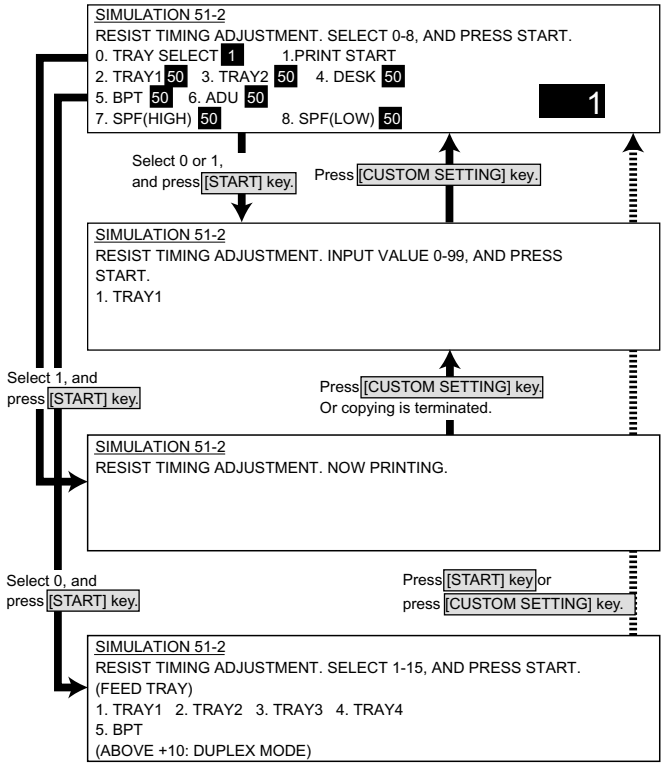
*1: Vb1-1 and Vb1-2 are enabled or disabled by SIM 44-1 Vb1 setup.

*2: When PTH is set to 0 with SIM 44-4, the detected value in this adjustment is displayed. If PTH is set to other than 0, the value set with SIM 44-4 is displayed.

Main code 51

51-2

Purpose	Adjustment
Function (Content)	Used to adjust the contact pressure of paper on the resist roller in each section (machine paper feed, duplex paper feed, SPF paper feed). (This adjustment is required when the print image position varies or when paper jam occurs frequently.)
Section	Paper transport (paper exit, switchback, transport)
Item	Operation
Operation/Procedure	Perform the resist quantity adjustment. 1) The current set value is highlighted on the right of each item. In this screen, be sure to select "1: COPY START." (Set value: 1) 2) Enter the correction value with 10 digit key pad. Press P to store the set value. 3) When the value is increased by 1, the resist quantity is changed by 1ms. 4) Press START to start copying and store the set value. (Display value: 1) 5) Select a paper feed tray. (Set value 2)


SIMULATION 51-2
RESIST TIMING ADJUSTMENT. SELECT 0-8, AND PRESS START.
0. TRAY SELECT 1 1.PRINT START
2. TRAY1 50 3. TRAY2 50 4. DESK 50
5. BPT 50 6. ADU 50
7. SPF(HIGH) 50 8. SPF(LOW) 50
1
Select 0 or 1, and press [START] key.
Press [CUSTOM SETTING] key.
SIMULATION 51-2
RESIST TIMING ADJUSTMENT. INPUT VALUE 0-99, AND PRESS START.
1. TRAY1
Select 1, and press [START] key.
Press [CUSTOM SETTING] key. Or copying is terminated.
SIMULATION 51-2
RESIST TIMING ADJUSTMENT. NOW PRINTING.
Select 0, and press [START] key.
Press [START] key or press [CUSTOM SETTING] key.
SIMULATION 51-2
RESIST TIMING ADJUSTMENT. SELECT 1-15, AND PRESS START.
(FEED TRAY)
1. TRAY1 2. TRAY2 3. TRAY3 4. TRAY4
5. BPT
(ABOVE +10: DUPLEX MODE)

<List of set values 1>

			45PPM	28PPM 35PPM
0	TRAY SELECT	Paper feed tray selection (1 - 5)		
1	PRINT START	Copy start (Initial value)		
2	TRAY1	Tray 1 resist adjustment value	60	65
3	TRAY2	Tray 2 resist adjustment value	50	55
4	DESK	Desk resist adjustment value	50	55
5	BPT	Manual tray resist adjustment value	55	60
6	ADU	ADU resist adjustment value	50	55
7	SPF(HIGH)	SPF resist adjustment value (High speed)	60	60
8	SPF(LOW)	SPF resist adjustment value (Low speed)	75	75

<List of display values 1>

Normal display		NOW COPYING
ERROR display	Door open	DOOR OPEN.
	Jam	JAM
	Paper empty	PAPER EMPTY.

<List of set values 2>

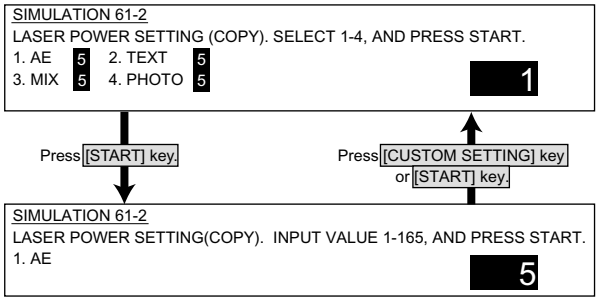
1	TRAY1	11	TRAY1 with Duplex
2	TRAY2	12	TRAY2 with Duplex
3	TRAY3	13	TRAY3 with Duplex
4	TRAY4	14	TRAY4 with Duplex
5	Manual feed	15	Manual feed with Duplex

* The selected tray is registered as an initial set value in the initial screen.

Main code 61

61-2

Purpose	Adjustment
Function (Content)	Used to adjust the laser power (absolute value) in the copy mode.
Section	PCU
Item	Operation
Operation/Procedure	Enter the laser power set value in copying, and press START to store it.

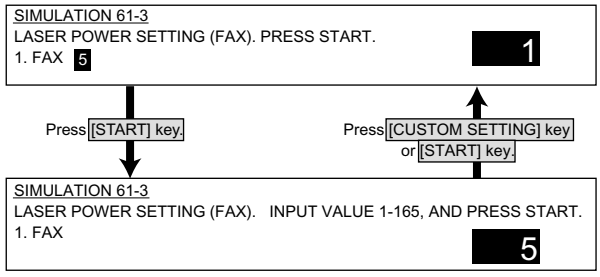

SIMULATION 61-2
LASER POWER SETTING (COPY). SELECT 1-4, AND PRESS START.
1. AE 5 2. TEXT 5
3. MIX 5 4. PHOTO 5
1
Press [START] key.
Press [CUSTOM SETTING] key or [START] key.
SIMULATION 61-2
LASER POWER SETTING(COPY). INPUT VALUE 1-165, AND PRESS START.
1. AE
5

<List of set values>

			Initial value	Set range
1	Auto exposure mode	45PPM	100	100 - 150 (45PPM) 76 - 150 (28/35PPM)
		35/28PPM	76	
2	Text mode	45PPM	100	
		35/28PPM	76	
3	Text/Photo mode	45PPM	100	
		35/28PPM	76	
4	Photo mode	45PPM	100	
		35/28PPM	76	

61-3

Purpose	Adjustment
Function (Content)	Used to adjust the scanner (exposure) laser power (absolute value) in the FAX reception mode. (Only when FAX is installed.)
Section	PCU
Item	Operation
Operation/Procedure	Set the laser power in FAX reception. Enter the set value and press Start to store it.

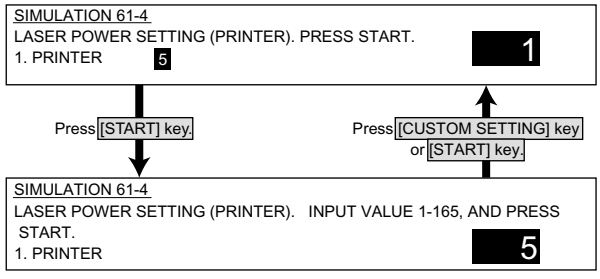


<List of set values>

			Initial value	Set range
1	FAX reception	45PPM	100	100 - 150 (45PPM) 76 - 150 (28/35PPM)
		35/28PPM	76	

61-4

Purpose	Adjustment
Function (Content)	Used to adjust the laser power (absolute value) in the printer mode.
Section	PCU
Item	
Operation/Procedure	Set the laser power value in the printer mode. Enter the value and press START to store it.



<List of set values>

			Initial value	Set range
1	PRINTER	45PPM	100	100 - 150 (45PPM) 76 - 150 (28/35PPM)
		28/35PPM	76	

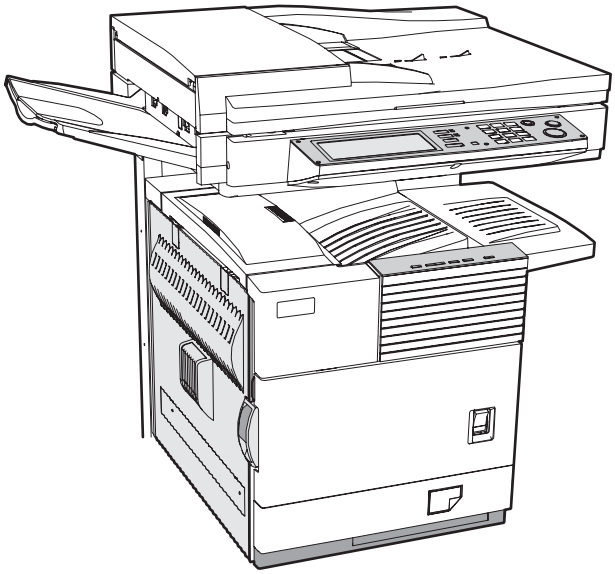
Default setup for supporting 100K drums

1) When the value is changed from 127 to 255 by SIM 44-1, the following default values of the laser power setup must be adjusted.

Drum	50K		100K(80K)		
Sim44-1	127		255		
Model	35PPM	45PPM	35PPM	45PPM	28PPM
Laser power setup SIM 61-2	80	104	76	100	76
Maintenance cycle SIM 21-1	0(50K)		7(100K)		5(80K)

* When the EEPROM is replaced (memory is cleared) in a 28-sheet machine, setup of the 100K drum must be performed with SIM 44-1 (setup value: 255).
The above setup values are adjusted according to the setup of SIM 44-1. (Though the destination setup is changed (SIM 26-6), the above setup will not be changed automatically.)

SHARP PARTS GUIDE



LASER PRINTER (MULTI FUNCTION)

MODEL AR-M280N AR-M280U

CONTENTS

- 1 Exteriors
- 2 Left door unit
- 3 PS roller unit
- 4 TC unit
- 7 Fusing unit
- 8 Delivery turn over unit
- 9 MC unit
- 10 Process unit
- 11 Developer unit
- 12 Controller BOX unit
- 14 Rear frame section 1
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The AR-M280N/M280U Parts Guide describes only the parts change from AR-P350/AR-P450 Parts Guide. for the common parts, please refer to the AR-P350/AR-P450(CODE :00ZAR350LPP1/) Parts Guide.

DEFINITION

The definition of each Rank is as follows and also noted in the list

A: Parts necessary to be stocked as High usage parts.
B: Parts necessary to be stocked as Standard usage parts.
C: Low usage parts.
D: Parts necessary for refurbish.
E: Unit parts recommended to be stocked for efficient after sales service.
Please note that the lead time for the said parts may be longer than normal parts.
S: Consumable parts.
Please note that the following parts used in Copier under the same description are classified into A or B Rank depending upon the place used.
Example: Gear made of Metal, Sprocket, Bearing, Belt made of Rubber, Spring clutch mechanism.
ARank : The parts which may be with the revolution or loading.
BRank : Parts similar to A Rank parts, but are not included in Rank A.

Because parts marked with "⚠" is indispensable for the machine safety maintenance and operation, it must be replaced with the parts specific to the product specification.

○ Other than this Parts Guide, please refer to documents Service Manual (including Circuit Diagram) of this model.
○ Please use the 13 digit code described in the right hand corner of front cover of the document, when you place an order.
○ For U.S. only-Use order codes provided in advertising literature. Do not order from parts department.

---

1 Exteriors

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
5	GCAB-0940FCZ2	BA		D	Paper exit tray exterior
11	HPNLC0243FCZ1	AP		D	Operation cabinet
26	CPNLH0020QS41	AK	N	D	Model panel [ARM280U]
	CPNLH0020QS42	AK	N	D	Model panel [ARM280N]

2 Left door unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
3	LX-BZ0147FCZ1	AC		C	Screw
9	PTME-0287FCZ1	AD		C	Transfer lock pawl
13	LANGT1407FCZ2	AR		C	ACC fixing angle F
16	PTME-0279FCZ1	AB		C	Left door lock pawl
27	NFANP0069FCZZ	AV		B	Fan

3 PS roller unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
11	PSHEP4925FCZZ	AC		C	Paper powder remove sub sheet
38	LX-BZ0589FCZZ	AA		C	Screw

4 Main drive unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
25	LX-BZ0670FCZ1	AC		C	Screw
67	LX-BZ0788FCZ1	AC		C	Screw
71	NSFTZ2576FCZ1	AL		C	PS roller shaft

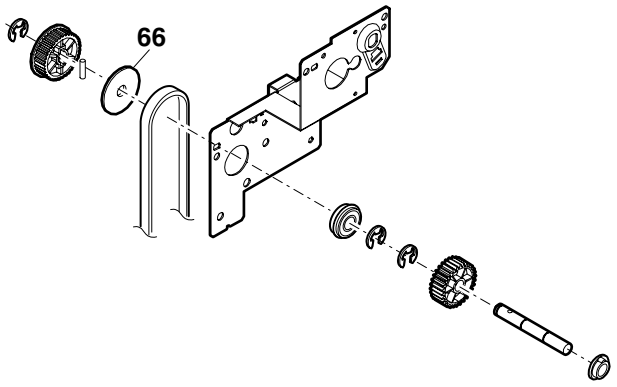
7 Fusing unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
3	PTME-0282FCZ1	AH		C	Upper separator pawl
11	PCOVP1546FCZ1	AY		C	Fusing upper cover

8 Delivery turn over unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
5	NFANP0069FCZZ	AV		B	Fan
10	PGiDM1896FCZ1	AV		C	Paper exit upper PG
14	LDAiU0626FCZ2	AK		C	Paper exit follower roller fixing plate
38	NBLTH0327FCZ1	AL		C	Belt
47	NBLTH0350FCZ1	AH		C	Belt
62	PBRSS0208FCZ1	AH		C	Discharge brush
66	PSHEP4962FCZ1	AC		C	Belt holder sheet

8 Delivery turn over unit



FCP05237

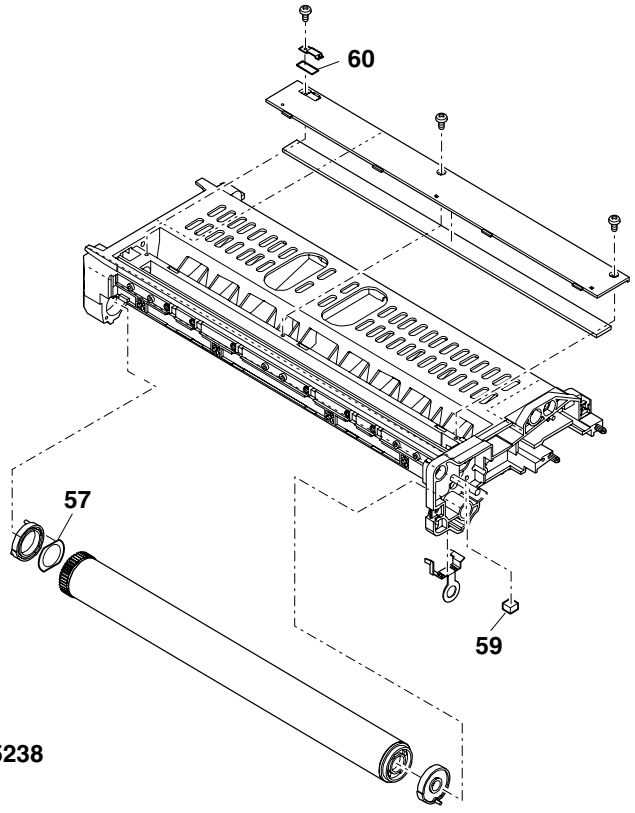
9 MC unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
3	CPLTM6048DS51	AL		E	Plate

10 Process unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
8	PMLT-1245FCZ2	AE		C	Process U cushion
16	MSPRC3010FCZ1	AB		C	Shutter open close spring
24	XBBSD30P08000	AA		C	Screw(3×8)
26	LX-BZ0656FCZ1	AE		C	Screw
45	PRNGF0106FCZ2	AC		C	Starling N
47	MSPRC2954FCZ2	AB		C	Sparation pawl spring
48	PMLT-1238FCZ1	AC		C	Toner shield cushion
57	LX-WZ0440FCZZ	AC		C	Spacer
59	PSPAZ1431FCZZ	AA		C	Spacer A
60	PSPAZ1432FCZZ	AA		C	Spacer B
501	CHLDZ1473DS51	BH		E	Separation pawl holder unit

10 Process unit

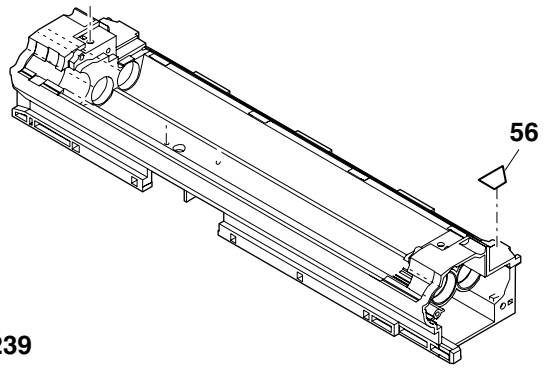


FCP05238

11 Developer unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
29	LPLTM6022FCZZ	AC		C	M4 plate
48	PMLT-1241FCZ1	AA		C	DV-BOX cushion
49	PMLT-1244FCZ1	AC		C	Docter cushion R
56	PMLT-1296FCZZ	AH		C	Shutter cushion

11 Developer unit

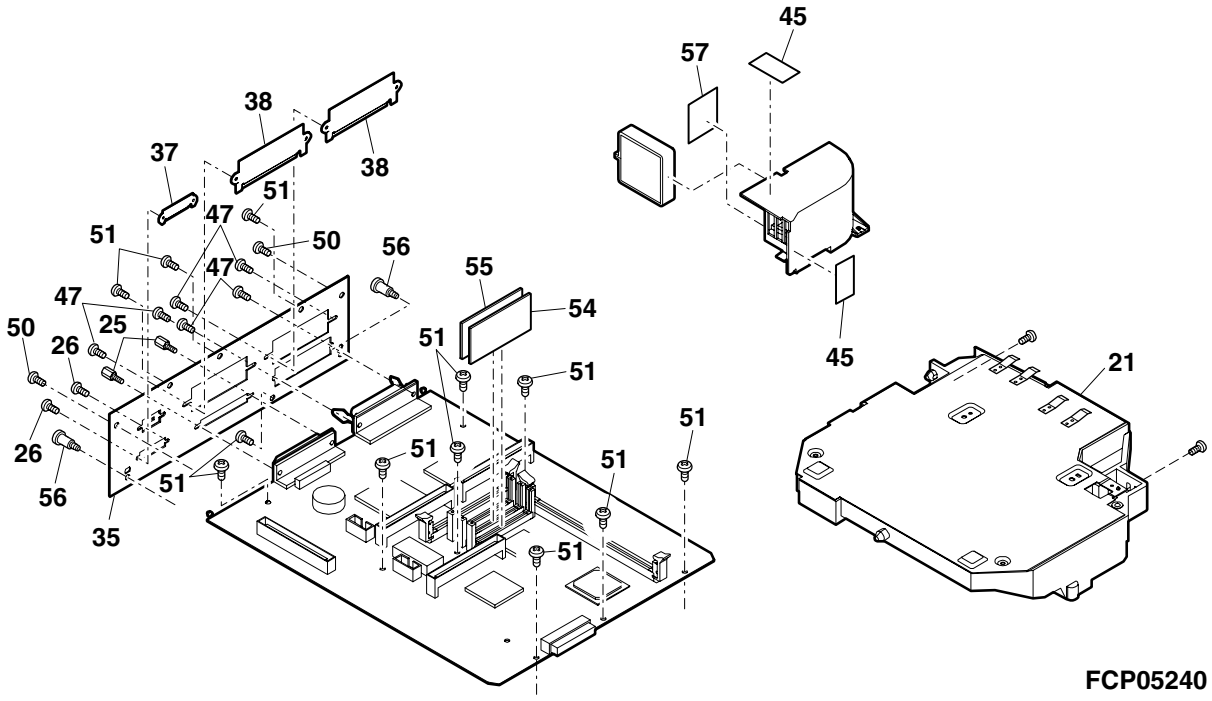


FCP05239

12 Controller BOX unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	PDUC-0165FCZ1	AF		C	Controller duct
5	NFANP0069FCZZ	AV		B	Fan
9	PCOVP1555FCZ1	AE		C	Controller BOX cover
12	NFANP0069FCZZ	AV		B	Fan
14	QCNW-0201FCZZ	AG		C	Printer interface FFC
21	DUNT-7093DS15	CD	N	E	LSU 28 unit
25	LX-BZ0921FCZ1	AE		C	Screw(3×6)
26	XBPSD26P06000	AA		C	Screw(2.6×6)
35	LPLTM5765FCZ1	AH		C	Control joint plate
37	PCOVP1560FCZZ	AC		C	FAX I/F cover
38	PCOVP1557FCZZ	AC		C	LAN/Option cover
45	PSHEP4945FCZZ	AC		C	Controller duct sheet B
47	XBPSD30P06000	AA		C	Screw(3×6)
50	XHBSE30P06000	AA		C	Screw(3×6)
51	XBBSD30P06000	AA		C	Screw(3×6)
54	VHi28F322L03F	BR		B	MFP flash ROM A(28F322L03F)
	VHi28F322L15F	BU		B	STD flash ROM A(28F322L15F)
55	VHi28F322L04F	BR		B	MFP flash ROM B(28F322L04F)
	VHi28F322L16F	BU		B	STD flash ROM B(28F322L16F)
56	LX-BZ0828FCZZ	AD		C	Screw
57	PSHEP5009FCZZ	AC		C	Control duct sheet

12 Controller BOX unit

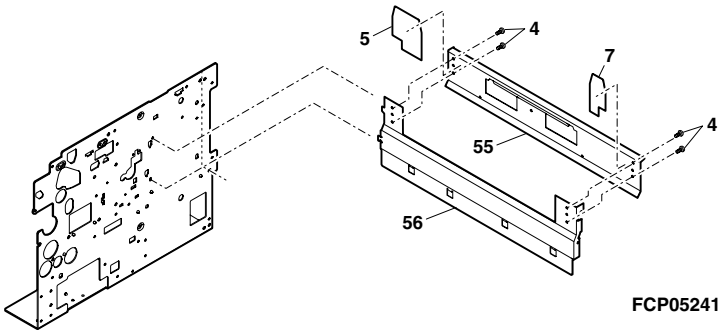


FCP05240

14 Rear frame section 1

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	NFANP0069FCZZ	AV		B	Fan
4	XHBSE40P08000	AA		C	Screw(4×8)
5	PSHEZ4874FCZ1	AC		C	LSU cleaning sheet R
7	PSHEZ4873FCZ1	AC		C	LSU cleaning sheet F
37	PSHEZ4885FCZ1	AB		C	Paper feed base sheet R
55	PCOVP1693FCZZ	AH		C	Duct support cover
56	LSTYM0255FCZ1	AL		C	Duct support plate

14 Rear frame section 1



FCP05241

15 Rear frame section 2

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
6	RPLU-0326FCZ2	AN		B	Separator pawl solenoid
26	CPWBN1515FCE2	BY	N	E	PCU PWB unit
54	QCNW-0205FCZZ	AC		C	HV interface FFC
55	QCNW-0204FCZZ	AC		C	Drum motor interface FFC
56	QCNW-0203FCZZ	AD		C	Main motor interface FFC
58	VHi28F081L06F	BE		B	PCU flash ROM(28F081L06F)

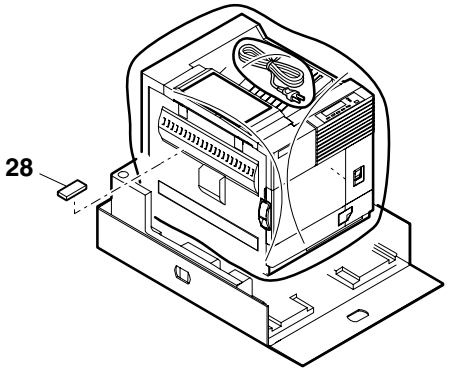
16 Cassette unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
20	PTPE-0243FCZ1	AC		C	Side plate tape
25	PGiDH1833FCZ1	AC	N	C	Side plate guide

17 Packing material & Accessories

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
5	SPAKC6122DS46		N	D	Packing case	[ARM280N]
	SPAKC6122DS45		N	D	Packing case	[ARM280U]
6	TCADZ1521FCZ1	AE		D	Fusing pressurization manual	
12	CDSKA0005FC39	AM		D	Printer CD	
13	PSHEP4927FCZZ	AM		D	Key sheet MFP	
20	TiNSE2288FCZZ	AZ	N	D	Operation manual PRT	[USA]
	TiNSF2289FCZZ		N	D	Operation manual PRT	[French]
	TiNSF2291FCZZ		N	D	Operation manual	[French]
	TiNSF2293FCZZ	AN		D	Operation manual	[French]
	TiNSF2296FCZZ		N	D	Operation manual	[French]
	TiNSE2290FCZZ	AU	N	D	Operation manual	[USA]
	TiNSE2292FCZZ	AN		D	Operation manual SCANNER	[USA]
	TiNSE2294FCZZ	AK	N	D	Operation manual KEY	[USA]
	TiNSE2295FCZZ	AK	N	D	Operation manual	[USA]
	TiNSE2297FCZZ	AN		D	Operation manual	[USA]
28	SPAKA6272FCZZ	AG		D	Fusing protect add R	

17 Packing material & Accessories



FCP05242

18 PCU PWB unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
1	QCNCM0670FCZZ	AC		C	Connector(5pin)	[CN17]
2	QCNCM0878FCZZ	AF		C	Connector(30pin)	[CN12]
3	QCNCM0923FC24	AF		C	Connector(24pin)	[CN13]
4	QCNCM0923FC32	AG		C	Connector(32Pin)	[CN4]
5	QCNCM1069ACZZ	AD		C	Connector(6pin)	[CN18]
6	QCNCM1143FCZZ	AG		C	Connector(22pin)	[CN11]
7	QCNCM1144FCZZ	AH		C	Connector(24pin)	[CN10]
8	QCNCM1175FCZZ	AG		C	Connector(30pin)	[CN16]
9	QCNCM5093SC0B	AB		C	Connector(2pin)	[CN7,22]
10	QCNCM7014SC0H	AB		C	Connector(8pin)	[CN5]
11	QCNCM7014SC1A	AC		C	Connector(11pin)	[CN8]
12	QCNCM7014SC1D	AC		C	Connector(14pin)	[CN14]
13	QCNCW0002ESZZ	AC		C	Connector(8pin)	[CN9]
14	QCNCW1136FCZZ	AC		C	Connector(8pin)	[CN6]
15	QCNCW1139FCZZ	AC		C	Connector(14pin)	[CN15]
16	QCNCW1140FCZZ	AD		C	Connector(28pin)	[CN1,2]
17	QCNCW1150FCZZ	AE		C	Connector(24pin)	[CN3]
18	QSOCZ0002QSZZ	AD		C	IC socket(8pin)	[IC17]
19	QSOCZ0071FCZZ	AP		C	Socket(MM20-72B1-1)	[SOCKET1]
20	QSW-P0005QSZZ	AC		B	Tact switch(B3F-6102)	[SW1]
21	RCRSZ0001QSZZ	AG		B	Crystal(19.6608MHz)	[X1]
22	RCRUB0002FCZZ	AP		B	Crystal(31.554MHz)	[X2]
23	RFiLN0042FCZZ	AC		C	EMI filter(ZJSR5101-101)	[NF1~11]
24	RFiLN0047FCZZ	AC		C	EMI filter(MMZ1608S121)	[NF12,13]
25	RMPTR4103ACZZ	AB		B	Block resistor(10KΩ×4)	[BR1~BR24]
26	VCCCCZ1HH100D	AA		C	Capacitor(50WV 10pF)	[C86]
27	VCCCCZ1HH101J	AA		C	Capacitor(50WV 100pF)	[C12,13,28,43]
28	VCCCCZ1HH220J	AA		C	Capacitor(50WV 22pF)	[C39,50]
29	VCEAGA0JW107M	AC		C	Capacitor(6.3WV 100μF)	[C146]
30	VCEAGU1AW476M	AA		C	Capacitor(10WV 47μF)	[C17]
31	VCEAGA1AW477M	AB		C	Capacitor(10WV 470μF)	[C99]
32	VCEAGA1CW477M	AB		C	Capacitor(16WV 470μF)	[C108,147]
33	VCEAGU1HW335M	AA		C	Capacitor(50WV 3.3μF)	[C63]
34	VCEAGA1VW106M	AA		C	Capacitor(35WV 10μF)	[C2,104]
35	VCEAGU1VW107M	AB		C	Capacitor(35WV 100μF)	[C117,118]
36	VCEAGA1VW227M	AB		C	Capacitor(35WV 220μF)	[C129]
37	VCEAGU1VW476M	AB		C	Capacitor(35WV 47μF)	[C9,144]
38	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10μF)	[C6,19,29,30,32,40,42,47]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10μF)	[C51,55,58,59,61,75,80]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10μF)	[C87,88,101,102,106,116]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10μF)	[C120,121,131,132,138]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10μF)	[C140,142,143,151,153]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10μF)	[C189,190,191]
39	VCKYCZ1EF223Z	AA		C	Capacitor(50WV 0.022μF)	[C14,62,100,107,123]
	VCKYCZ1EF223Z	AA		C	Capacitor(50WV 0.022μF)	[C124,128,130,145]
40	VCKYCZ1HB102K	AA		C	Capacitor(50WV 1000pF)	[C1,5,15,16,18,31,33,34]
	VCKYCZ1HB102K	AA		C	Capacitor(50WV 1000pF)	[C36,37,41,44,46,48,49,52]
	VCKYCZ1HB102K	AA		C	Capacitor(50WV 1000pF)	[C53,54,57,60,64~74]
	VCKYCZ1HB102K	AA		C	Capacitor(50WV 1000pF)	[C76,77,78,81,82~85]
	VCKYCZ1HB102K	AA		C	Capacitor(50WV 1000pF)	[C89,90,91,93,94,96,97,98]
	VCKYCZ1HB102K	AA		C	Capacitor(50WV 1000pF)	[C103,105,109~115,119]
	VCKYCZ1HB102K	AA		C	Capacitor(50WV 1000pF)	[C125,126,127,133,136,137]
	VCKYCZ1HB102K	AA		C	Capacitor(50WV 1000pF)	[C139,141,149,155,156,160]
	VCKYCZ1HB102K	AA		C	Capacitor(50WV 1000pF)	[C173~188,148,154]
41	VCKYCZ1HB222K	AA		C	Capacitor(50WV 2200pF)	[C3,7,8,11]
42	VCQYNU1HM103K	AA		C	Capacitor(50WV 0.010μF)	[C150]
43	VHDDAN202K//-1	AB		B	Diode(DAN202K)	[D1,8,9,11,13,16]
	VHDDAN202K//-1	AB		B	Diode(DAN202K)	[D18,23,29,32]
44	VHDDAP202K//-1	AB		B	Diode(DAP202K)	[D10,14,15,17,30]
45	VHDDA204K//-1	AC		B	Diode(DA204K)	[D2,3,12,19,20,31]
46	VHDDSS133//-1	AA		B	Diode(1SS133)	[D25,26,27]
47	VHDMA704A//-1	AC		B	Diode(MA704A)	[D22,28]
48	VHDM1FL20U+-1	AC		B	Diode(M1FL20U)	[D4,5,6,7,33]
49	VHEHZS3B3//-1	AB		B	Zener diode(HZS3B3)	[ZD1]
50	VHERD22FB//-1	AD		B	Zener diode(RD22FB)(20.8-23.3V)	[ZD2,3]
51	VHiD82805GN-1	BA		B	IC(D82805GN)	[IC16]
52	VHiEES04L400P	AG		B	IC(EES04L400P)	[IC17]
53	VHiFS781BZB-1	AP		B	IC(FS781BZB)	[IC13]
54	VHiFS781BZB-1	AP		B	IC(FS781BZB)	[IC13]
	VHiH8S2322R-1	AZ		B	IC(H8S2322R)	[IC8]
55	VHiLM324D++-1	AE		B	IC(LM324D)	[IC22]
56	VHiLM339D++-1	AE		B	IC(LM339D)	[IC18,21]
57	VHiLVX240SJ-1	AG		B	IC(LVX240SJ)	[IC6]
58	VHiMTD13611-1	AR		B	IC(MTD1361-4101)	[IC3]
59	VHiNJM7805A-1	AH		B	IC(NJM7805A)	[IC25]
60	VHiTA7291S/-1	AF		B	IC(TA7291S)	[IC2,15]
61	VHiTD62003AP1	AG		B	IC(TD620003AP1)	[IC1,19,20]
62	VHiTD62503F/-	AG		B	IC(TD62503F)	[IC7,12,14,23,24,26]
63	VHi74VHCT240X	AF		B	IC(74VHCT240X)	[IC9]
64	VHi74VHCT244X	AF		B	IC(74VHCT244X)	[IC4,5,10]

18 PCU PWB unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
65	VHP1LHEE-002A	AC		B	LED (Red)(1LHEE-002A)	[LED1]
66	VHViCPS1.2/-1	AF		B	IC protecrot(ICPS1.2)	[ICP1]
67	VRD-HT2EY911J	AA		C	Resistor(1/4W 910Ω ±5%)	[R141]
68	VRD-HT2HY242J	AA		C	Resistor(1/2W 2.4KΩ ±5%)	[R5,6]
69	VRD-HT2HY471J	AA		C	Resistor(1/2W 470Ω ±5%)	[R172,173]
70	VRS-CZ1JD000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R1,39,110,170,171,199]
	VRS-CZ1JD000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R200,201,203,204,207]
71	VRS-CZ1JD101J	AA		C	Resistor(1/16W 100Ω ±5%)	[R59,125,178,197,198]
72	VRS-CZ1JD102J	AA		C	Resistor(1/16W 1.0KΩ ±5%)	[R13,15,36,44,51]
	VRS-CZ1JD102J	AA		C	Resistor(1/16W 1.0KΩ ±5%)	[R140,205,206]
73	VRS-CZ1JD103F	AA		C	Resistor(1/16W 10KΩ ±1%)	[R2,132,154,157,182]
74	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R4,12,22,23,27~33]
	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R35,38,43,52~55,72]
	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R73,74,77,80,83,84,92]
	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R93,94,104,106,108]
	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R109,111,112,113,115]
	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R117~120,123,126]
	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R127,129,133,135,136]
	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R144,153,161,164,165]
	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R179,183,188,292,294]
75	VRS-CZ1JD104J	AA		C	Resistor(1/16W 100KΩ ±5%)	[R138]
76	VRS-CZ1JD122J	AA		C	Resistor(1/16W 1.2KΩ ±5%)	[R151]
77	VRS-CZ1JD151J	AA		C	Resistor(1/16W 150Ω ±5%)	[R17,24]
78	VRS-CZ1JD152F	AA		C	Resistor(1/16W 1.5KΩ ±1%)	[R142,150]
79	VRS-CZ1JD152J	AA		C	Resistor(1/16W 1.5KΩ ±5%)	[R16]
80	VRS-CZ1JD153F	AB		C	Resistor(1/16W 15KΩ ±1%)	[R152,181]
81	VRS-CZ1JD201J	AA		C	Resistor(1/16W 200Ω ±5%)	[R25,26,139]
82	VRS-CZ1JD203J	AA		C	Resistor(1/16W 300KΩ ±5%)	[R11,114,145,166,174]
	VRS-CZ1JD203J	AA		C	Resistor(1/16W 300KΩ ±5%)	[R175,176,177,191,192]
	VRS-CZ1JD203J	AA		C	Resistor(1/16W 300KΩ ±5%)	[R193,194,195,196]
83	VRS-CZ1JD304F	AA		C	Resistor(1/16W 20KΩ ±5%)	[R146,159]
84	VRS-CZ1JD330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R40,41,45~50,56,57]
	VRS-CZ1JD330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R58,60~63,65,66,68]
	VRS-CZ1JD330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R69,70,71,75,76,78,79]
	VRS-CZ1JD330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R85~91,95~103]
85	VRS-CZ1JD332J	AA		C	Resistor(1/16W 3.3KΩ ±5%)	[R81]
86	VRS-CZ1JD471J	AA		C	Resistor(1/16W 470Ω ±5%)	[R18,19]
87	VRS-CZ1JD472F	AA		C	Resistor(1/16W 4.7kΩ ±1%)	[R131,143,149,163]
88	VRS-CZ1JD473F	AA		C	Resistor(1/16W 47kΩ ±1%)	[R148,162]
89	VRS-CZ1JD473J	AA		C	Resistor(1/16W 47KΩ ±5%)	[R186,187,189,190]
90	VRS-CZ1JD562J	AA		C	Resistor(1/16W 5.6KΩ ±5%)	[R137,169]
91	VRS-CZ1JD621F	AA		C	Resistor(1/16W 620Ω ±1%)	[R147,158]
92	VRS-CZ1JD680J	AA		C	Resistor(1/16W 68Ω ±5%)	[R105]
93	VRS-CZ1JD681F	AA		C	Resistor(1/16W 680Ω ±1%)	[R156,185]
94	VRS-CZ1JD681J	AA		C	Resistor(1/16W 680Ω ±5%)	[R42]
95	VRS-CZ1JD752J	AA		C	Resistor(1/16W 7.5KΩ ±5%)	[R3,21]
96	VRS-CZ1JD822F	AA		C	Resistor(1/16W 8.2KΩ ±1%)	[R155,184]
97	VRS-RE3AA241J	AC		C	Resistor(1W 240Ω ±5%)	[R160]
98	VRS-RE3DA1R0J	AB		C	Resistor(2W 1.0Ω ±5%)	[R14,20]
99	VRS-RE3DA8R2J	AC		C	Resistor(1W 8.2Ω ±5%)	[R167]
100	VSDTA123YK/-1	AB		B	Transistor(DTA123YK)	[Q8,9]
101	VSDTC114YK/-1	AC		B	Transistor(DTC114YK)	[Q2,4,5,6,7]
102	VSDTD114EK/-1	AC		B	Transistor(DTD114EK)	[Q1]
103	VS2SK3018++-1	AC		B	Transistor(2SK3018)	[Q10,11]
	(Unit)					
901	CPWBN1515FCE2	BY	N	E	PCU PWB unit	

20 Mother board

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
9	VRS-RE3LA6R2J	AC		C	Resistor(3W 6.2Ω ±5%)

26 MFP Control PWB (ARM280N)

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
1	PCAPH0010GCZZ	AD		C	Jumper cap(JM-2W-96)	[JP2,3,4,5,6,7]
2	PCÖVP1468FCZZ	AD		C	Battery cover	
3	QCNCM1183FCZZ	AM		C	Connector(100P15.2JXK)	[CN2,12]
4	QCNCM1146FCZZ	AE		C	Connector(9A12-1034)	[CN14]
5	QCNCM1182FCZZ	AM		C	Connector(100P9.2JXKS)	[CN16]
6	QCNCW0946FCZZ	AH		C	Connector(36pin)	[CN1]
7	QCNCW1147FCZZ	AL		C	Connector(TX2450RLTH1)	[CN13]

26 MFP Control PWB (ARM280N)

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
8	QCNCW11149FCZZ	AN		C	Connector(8AL068S305C)	[CN8]
⚠ 9	QFS-D132CQCZZ	AG		A	Fuse(1.25/250T)	[F1]
10	QFSHB0028FCZZ	AC		C	Fuse holder(TP00351-31)	[F1]
11	QPiN-0003GCZZ	AC		C	Pin(T3B-SQ)	[JP2,3,4,5,6,7,]
12	QSŌCZ0001QSZZ	AL		C	Socket(DMM168-FLAA2-3A133)	[CN3]
13	QSŌCZ0073FCNA	AL		C	Connector(DMM2SD72A11)	[CN4,5,6]
14	QSŌCZ6428ACZZ	AE		C	IC socket(28pin)	[IC36]
15	RCRSP6676RCZZ	AG		B	Crystal(32.768KHz)	[X6]
16	RCRUA0005FCZZ	AP		B	Crystal(14.745KHz)	[X7]
17	RCRUA0007FCZZ	AP		B	Crystal(31.554MHz)	[X4]
18	RCRUA0008FCZZ	AP		B	Crystal(40.57MHz)	[X2]
19	RCRUA0009FCZZ	AP		B	Crystal(66.666MHZ)	[X3]
20	RCRUA0012FCZZ	AP		B	Crystal(66.666MHz)Äi5VLLLÅj	[X1]
21	RCRUA0014FCZZ	AP		B	Crystal(68.5MHz)	[X5]
22	RFiLN0048FCZZ	AC		C	Ferrite bead(BLM10B121SB)	[L2,3]
23	RFiLN0051FCZZ	AC		C	Ferrite bead(MMZ1608D121B)	[L25~30,33,34]
24	RMPTR4100ACZZ	AB		B	Block resistor(10Ω×4)	[BR6~13,15~25,28,29]
	RMPTR4100ACZZ	AB		B	Block resistor(10Ω×4)	[BR33~44,46,48,53~72]
25	RMPTR4103ACZZ	AB		B	Block resistor(10KΩ×4)	[BR1~5,14,26,27,30,31,32]
	RMPTR4103ACZZ	AB		B	Block resistor(10KΩ×4)	[BR74,76,78,80~102]
26	RMPTR4330ACZZ	AB		B	Block resistor(33Ω×4)	[BR47,49,50,51,73,75,77,79]
27	RMPTR4472ACZZ	AB		B	Block resistor(4.7KΩ×4)	[BR45,52]
28	UBATi0014FCZZ	AN		B	Battery(CR2477-H01)	[BT1]
29	VCCCCZ1HH101J	AA		C	Capacitor(50WV 100pF)	[C7,8,10,17,18,20,22,30,33]
	VCCCCZ1HH101J	AA		C	Capacitor(50WV 100pF)	[C35,38,39,40,43,47,48,51]
30	VCCCCZ1HH220J	AA		C	Capacitor(50WV 22pF)	[C61]
31	VCEAPH1HC105M	AC		C	Capacitor(50WV 1µF)	[C181,188,205,206]
32	VCEAPS1AC227M	AD		C	Capacitor(10WV 220µF)	[C309,310]
33	VCEAPS1CC106M	AC		C	Capacitor(16WV 10µF)	[C1,6,21,75,94,111,125,165]
	VCEAPS1CC106M	AC		C	Capacitor(16WV 10µF)	[C166,169,178,179,223,224]
34	VCEAPS1CC226M	AC		C	Capacitor(16WV 22µF)	[C57,64,90,114,115,136,170,176]
35	VCEAPS1CC476M	AC		C	Capacitor(16WV 47µF)	[C95,167,168,180]
36	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10µF)	[C3,9,11,12,13,14,23~29]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10µF)	[C31,32,34,36,37,41,42,44,45]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10µF)	[C46,49,50,52,53,54,55,56]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10µF)	[C58,59,60,62,63,65,66,67]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10µF)	[C68,70,71,72,73,74,76~82]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10µF)	[C85,86,87,88,89,91,92,93]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10µF)	[C96,97,98,99,100,102~108]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10µF)	[C110,112,113,116~124,126]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10µF)	[C127,128,130,131,132,133]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10µF)	[C134,135,137,139,140~145]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10µF)	[C149,151,153~164,172,173]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10µF)	[C177,182,183,185,186,187]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10µF)	[C189~199,201,202,204]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10µF)	[C208~222,235~262]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10µF)	[C264~279,292~303]
37	VCKYCZ1HB102K	AA		C	Capacitor(50WV 1000pF)	[C129]
38	VCKYCZ1HF103Z	AA		C	Capacitor(50WV 0.01µF)	[C69,109]
39	VHDDAP202U/-1	AB		B	Diode(DAP202U)	[D7,10]
40	VHDRB451F//-1	AD		B	Diode(RB451F)	[D12,14,20,21,22]
41	VHDRLS73///-1	AA		B	Diode(RLS73)	[D8,9]
42	VHi65946P07-1	BA		B	IC(65946P07)	[IC32]
43	VHi74LCX08MTC	AE		B	IC(74LCX08MTC)	[IC26,46]
44	VHi74LCX14MTC	AE		B	IC(74LCX14MTC)	[IC43]
45	VHi74LCX244MT	AG		B	IC(74LCX244MT)	[IC12]
46	VHi74LCX32MTC	AE		B	IC(74LCX32MTC)	[IC11]
47	VHi74LVX16128	AP		B	IC(74LVX16128)	[IC15]
48	VHi90LV17AW-1	AP		B	IC(90LV17AW)	[IC18]
49	VHiDS14C238//	AT		B	IC(DS14C238)	[IC42]
50	VHiEEP64-120P	AW		B	IC(EEP64-120P)	[IC36]
51	VHiHG73C095-1	AY		B	IC(HG73C095)	[IC53]
52	VHiKS0U1347-1	BN		B	IC(KS0U1347)	[IC19]
53	VHiLCX157MT-1	AG		B	IC(LCX157MT)	[IC14]
54	VHiLCX16244-1	AM		B	IC(LCX16244)	[IC21,49,50]
55	VHiLCX16245-1	AM		B	IC(LCX16245)	[IC16,24,31,51,52]
56	VHiLCX16373-1	AM		B	IC(LCX16373)	[IC34]
57	VHiLCX74MTC-1	AE		B	IC(LCX74MTC)	[IC10]
58	VHiLM393D++-1	AE		B	IC(LM393D)	[IC39]
59	VHiLVT240MT-1	AL		B	IC(LVT240MT)	[IC8]
60	VHiM87J4810-1	BK		B	IC(M87J4810)	[IC25]
61	VHiN2370R04-1	AF		B	IC(N2370R04)	[IC23]
62	VHiN2370R33-1	AF		B	IC(N2370R33)	[IC54]
63	VHiN2391D25-1	AG		B	IC(N2391D25)	[IC35,33]
64	VHiNJM317DL-1	AK		B	IC(NJM317DL)	[IC2]
65	VHiNJU6356E-1	AK		B	IC(NJU6356E)	[IC40]
66	VHiPi6C2309-1	AR		B	IC(PI6C2309)	[IC9,29]
67	VHiPM2500++-1	BP		B	IC(PM2500)	[IC13]
68	VHiPST598DN-1	AF		B	IC(PST598DN)	[IC47]
69	VHiPST598iN-1	AF		B	IC(PST598I)	[IC48]

26 MFP Control PWB (ARM280N)

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
70	VHiSD4M16L1-1	AZ		B	IC(SD4M16L1)	[IC22]
71	VHiSD8M16L1-1	BB		B	IC(SD8M16L1)	[IC4,5,6,7,27]
72	VHiSR1024-7LL	AU		B	IC(SR1024-7LL)	[IC55,56]
73	VHiT4955A20-1	BF		B	IC(T4955A20)	[IC20]
74	VHiTD62503F-1	AF		B	IC(TD62503F)	[IC38,41,44,45]
75	VHP1LHEE-002A	AC		B	LED (Red)(1LHEE-002A)	[D13]
76	VHV1608C2701C	AC		B	Varistor(1608C2701C)	[RV1~6]
77	VHViCPS1.2/-1	AF		B	IC protecrot(ICPS1.2)	[Q1]
78	VRS-CZ1JD000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R1,3,32,33,49,77,94,97,106]
	VRS-CZ1JD000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R108,120,141,166,198,220,222]
	VRS-CZ1JD000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R225,229,232,233,290~307]
	VRS-CZ1JD000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R310~348,399,400,406]
	VRS-CZ1JD000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R407,409,410,413,414]
79	VRS-CZ1JD100J	AA		C	Resistor(1/16W 10Ω ±5%)	[R36,59,64,65,96,116,118,126]
	VRS-CZ1JD100J	AA		C	Resistor(1/16W 10Ω ±5%)	[R127,136,137,149,161,170,177,185]
80	VRS-CZ1JD101J	AA		C	Resistor(1/16W 100Ω ±5%)	[R9,10,101,102,109]
	VRS-CZ1JD101J	AA		C	Resistor(1/16W 100Ω ±5%)	[R183,235,236,403]
81	VRS-CZ1JD102J	AA		C	Resistor(1/16W 1.0KΩ ±5%)	[R11,129,130,134,151,204]
	VRS-CZ1JD102J	AA		C	Resistor(1/16W 1.0KΩ ±5%)	[R205,243,244,253,268,279]
82	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R12,13,15,16,18,20,44,45]
	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R60,61,62,70,72,73,86,91]
	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R93,112,115,123,131,139]
	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R144,154,158,159,160,163]
	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R165,167,168,203,207,208]
	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R213,216,217,230,237,238]
	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R239,240,241,242,245,246]
	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R249,254,259,260,261,263]
	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R264,267,269,271,272,273]
	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R274,282,283,284,285]
83	VRS-CZ1JD183J	AA		C	Resistor(1/16W 18KΩ ±5%)	[R275,280]
84	VRS-CZ1JD220J	AA		C	Resistor(1/16W 22Ω ±5%)	[R14,17,19,24,27,30,31,34]
	VRS-CZ1JD220J	AA		C	Resistor(1/16W 22Ω ±5%)	[R35,37,39,40,43,46,51,54]
	VRS-CZ1JD220J	AA		C	Resistor(1/16W 22Ω ±5%)	[R57,247,252]
85	VRS-CZ1JD221J	AA		C	Resistor(1/16W 220Ω ±5%)	[R180,181,404]
86	VRS-CZ1JD222J	AA		C	Resistor(1/16W 2.2KΩ ±5%)	[R199,200,209,210,211,212]
	VRS-CZ1JD222J	AA		C	Resistor(1/16W 2.2KΩ ±5%)	[R218,223,248,265,266,276]
87	VRS-CZ1JD330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R25,38,41,47,48,52,56,58,66]
	VRS-CZ1JD330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R67,68,69,92,117,138,142]
	VRS-CZ1JD330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R143,147,148,152,153,173]
	VRS-CZ1JD330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R174,175,176,187,188,]
	VRS-CZ1JD330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R214,288,289]
88	VRS-CZ1JD332J	AA		C	Resistor(1/16W 3.3KΩ ±5%)	[R215,119]
89	VRS-CZ1JD333J	AA		C	Resistor(1/16W 33KΩ ±5%)	[R107,179]
90	VRS-CZ1JD470J	AA		C	Resistor(1/16W 47Ω ±5%)	[R53,55,308,309]
91	VRS-CZ1JD472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R63,71,74,76,87,100,111,121]
	VRS-CZ1JD472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R122,124,128,133,146,162,164]
	VRS-CZ1JD472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R184,206,221,224,226,227,228]
	VRS-CZ1JD472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R231,250,251,262,270,277]
92	VRS-CZ1JD511J	AA		C	Resistor(1/16W 510Ω ±5%)	[R278]
93	VRS-CZ1JD750J	AA		C	Resistor(1/16W 75Ω ±5%)	[R114,145]
94	VRS-CZ1JD823J	AA		C	Resistor(1/16W 82KΩ ±5%)	[R202]
95	VSDTC114EK/-1	AB		B	Transistor(DTC114EK)	[Q3]
96	VSDTC114YK/-1	AC		B	Transistor(DTC114YK)	[Q4]
97	VSUPA502T//-1	AD		B	Transistor(UPA502T)	[Q5,6,7]

27 STD control PWB (ARM280U)

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
1	PCAPH0010GCZZ	AD		C	Jumper cap(JM-2W-96)	[JP2~7]
2	PCÖVP1468FCZZ	AD		C	Battery cover	
3	QCNCM1146FCZZ	AE		C	Connector(9A12-1034)	[CN14]
4	QCNCM1182FCZZ	AM		C	Connector(100P9.2JXKS)	[CN16]
5	QCNCM1183FCZZ	AM		C	Connector(100P15.2JXK)	[CN2,12]
6	QCNCW0946FCZZ	AH		C	Connector(36pin)	[CN1]
7	QCNCW1147FCZZ	AL		C	Connector(TX2450RLTH1)	[CN13]
8	QCNCW1149FCZZ	AN		C	Connector(8AL068S305C)	[CN8]
⚠ 9	QFS-D132CQCZZ	AG		A	Fuse(1.25/250T)	[F1]
10	QFSHB0028FCZZ	AC		C	Fuse holder(TP00351-31)	[F1]
11	QPiN-0003GCZZ	AC		C	Pin(T3B-SQ)	[JP2~7]
12	QSÖCZ0001QSZZ	AL		C	Socket(DMM168-FLAA2-3A133)	[CN3]
13	QSÖCZ0073FCNA	AL		C	Connector(DMM2SD72A11)	[CN4,5,6]
14	QSÖCZ6428ACZZ	AE		C	IC socket(28pin)	[IC36]
15	RCRSP6676RCZZ	AG		B	Crystal(32.768KHz)	[X6]
16	RCRUA0005FCZZ	AP		B	Crystal(14.745KHz)	[X7]
17	RCRUA0007FCZZ	AP		B	Crystal(31.554MHz)	[X4]
18	RCRUA0008FCZZ	AP		B	Crystal(40.57MHz)	[X2]

27 STD control PWB (ARM280U)

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
19	RCRUA0009FCZZ	AP		B	Crystal(66.666MHZ)	[X3]
20	RCRUA0012FCZZ	AP		B	Crystal(66.666MHz)Äi5VLLLÅj	[X1]
21	RCRUA0014FCZZ	AP		B	Crystal(68.5MHz)	[X5]
22	RFiLN0048FCZZ	AC		C	Ferrite bead(BLM10B121SB)	[L2,3]
23	RFiLN0051FCZZ	AC		C	Ferrite bead(MMZ1608D121B)	[L25~30,33,34]
24	RMPTR4100ACZZ	AB		B	Block resistor(10Ω×4)	[BR6~13,15~25,28,29]
	RMPTR4100ACZZ	AB		B	Block resistor(10Ω×4)	[BR33~44,46,48,53~72]
25	RMPTR4103ACZZ	AB		B	Block resistor(10KΩ×4)	[BR1~5,14,26,27,30,31,32]
	RMPTR4103ACZZ	AB		B	Block resistor(10KΩ×4)	[BR74,76,78,80~102]
26	RMPTR4330ACZZ	AB		B	Block resistor(33Ω×4)	[BR47,49,50,51,73,75,77,79]
27	RMPTR4472ACZZ	AB		B	Block resistor(4.7KΩ×4)	[BR45,52]
28	UBATi0014FCZZ	AN		B	Battery(CR2477-H01)	[BT1]
29	VCCCCZ1HH101J	AA		C	Capacitor(50WV 100pF)	[C7,8,10,17,18,20,22,30,33]
	VCCCCZ1HH101J	AA		C	Capacitor(50WV 100pF)	[C35,38,39,40,43,47,48,51]
30	VCCCCZ1HH220J	AA		C	Capacitor(50WV 22pF)	[C61]
31	VCEAPH1HC105M	AC		C	Capacitor(50WV 1µF)	[C181,188,205,206]
32	VCEAPS1AC227M	AD		C	Capacitor(10WV 220µF)	[C309,310]
33	VCEAPS1CC106M	AC		C	Capacitor(16WV 10µF)	[C1,6,21,75,94,111,125,165]
	VCEAPS1CC106M	AC		C	Capacitor(16WV 10µF)	[C166,169,178,179,223,224]
34	VCEAPS1CC226M	AC		C	Capacitor(16WV 22µF)	[C57,64,90,114,115]
	VCEAPS1CC226M	AC		C	Capacitor(16WV 22µF)	[C136,170,176]
35	VCEAPS1CC476M	AC		C	Capacitor(16WV 47µF)	[C95,167,168,180]
36	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10µF)	[C3,9,11,12,13,14]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10µF)	[C23~29,31,32,34]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10µF)	[C36,37,41,42,44,45,46,49]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10µF)	[C50,52~56,58,59,60]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10µF)	[C62,63,65,66,67,68,70,71]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10µF)	[C72,73,74,76~82]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10µF)	[C85~89,91,92,93]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10µF)	[C96~100,102~108]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10µF)	[C110,112,113,116~124]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10µF)	[C126,127,128,130~135]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10µF)	[C137,139~145,149,151]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10µF)	[C153~164,172,173,177]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10µF)	[C182,183,185,186,187]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10µF)	[C189~199,201,202,204]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10µF)	[C208~222,235~262]
	VCKYCZ1CF104Z	AB		C	Capacitor(16WV 0.10µF)	[C264~279,292~303]
37	VCKYCZ1HB102K	AA		C	Capacitor(50WV 1000pF)	[C129]
38	VCKYCZ1HF103Z	AA		C	Capacitor(50WV 0.01µF)	[C69,109]
39	VHDDAP202U/-1	AB		B	Diode(DAP202U)	[D7,10]
40	VHDRB451F//-1	AD		B	Diode(RB451F)	[D12,14,20,21,22]
41	VHDRLS73///-1	AA		B	Diode(RLS73)	[D8,9]
42	VHi65946P07-1	BA		B	IC(65946P07)	[IC32]
43	VHi74LCX08MTC	AE		B	IC(74LCX08MTC)	[IC26,46]
44	VHi74LCX14MTC	AE		B	IC(74LCX14MTC)	[IC43]
45	VHi74LCX244MT	AG		B	IC(74LCX244MT)	[IC12]
46	VHi74LCX32MTC	AE		B	IC(74LCX32MTC)	[IC11]
47	VHi74LVX16128	AP		B	IC(74LVX16128)	[IC15]
48	VHi90LV17AW-1	AP		B	IC(90LV17AW)	[IC18]
49	VHiDS14C238//	AT		B	IC(DS14C238)	[IC42]
50	VHiEEP64-120P	AW		B	IC(EEP64-120P)	[IC36]
51	VHiHG73C095-1	AY		B	IC(HG73C095)	[IC53]
52	VHiKS0U1347-1	BN		B	IC(KS0U1347)	[IC19]
53	VHiLCX157MT-1	AG		B	IC(LCX157MT)	[IC14]
54	VHiLCX16244-1	AM		B	IC(LCX16244)	[IC21,49,50]
55	VHiLCX16245-1	AM		B	IC(LCX16245)	[IC16,24,31,51,52]
56	VHiLCX16373-1	AM		B	IC(LCX16373)	[IC34]
57	VHiLCX74MTC-1	AE		B	IC(LCX74MTC)	[IC10]
58	VHiLM393D++-1	AE		B	IC(LM393D)	[IC39]
59	VHiLVT240MT-1	AL		B	IC(LVT240MT)	[IC8]
60	VHiM87J4810-1	BK		B	IC(M87J4810)	[IC25]
61	VHiN2370R04-1	AF		B	IC(N2370R04)	[IC23]
62	VHiN2370R33-1	AF		B	IC(N2370R33)	[IC54]
63	VHiN2391D25-1	AG		B	IC(N2391D25)	[IC33,35]
64	VHiNJM317DL-1	AK		B	IC(NJM317DL)	[IC2]
65	VHiNJU6356E-1	AK		B	IC(NJU6356E)	[IC40]
66	VHiPi6C2309-1	AR		B	IC(PI6C2309)	[IC9,29]
67	VHiPM2500++-1	BP		B	IC(PM2500)	[IC13]
68	VHiPST598DN-1	AF		B	IC(PST598DN)	[IC47]
69	VHiPST598iN-1	AF		B	IC(PST598I)	[IC48]
70	VHiSD4M16L1-1	AZ		B	IC(SD4M16L1)	[IC22]
71	VHiSD8M16L1-1	BB		B	IC(SD8M16L1)	[IC4,5,6,7,27]
72	VHiSR1024-7LL	AU		B	IC(SR1024-7LL)	[IC55,56]
73	VHiT4955A20-1	BF		B	IC(T4955A20)	[IC20]
74	VHiTD62503F-1	AF		B	IC(TD62503F)	[IC38,41,44,45]
75	VHP1LHEE-002A	AC		B	LED (Red)(1LHEE-002A)	[D13]
76	VHV1608C2701C	AC		B	Varistor(M1608C270KT)	[RV1~6]
77	VHViCPS1.2/-1	AF		B	IC protecrot(ICPS1.2)	[Q1]
78	VRS-CZ1JD000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R1,3,32,33,49,94,97]

27 STD control PWB (ARM280U)

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
	VRS-CZ1JD000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R106,108,120,141,166]
	VRS-CZ1JD000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R198,220,222,225,229]
78	VRS-CZ1JD000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R232,233,290~307]
	VRS-CZ1JD000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R310~348,399,400,406]
	VRS-CZ1JD000J	AA		C	Resistor(1/16W 0Ω ±5%)	[R407,409,410,413,414]
	VRS-CZ1JD100J	AA		C	Resistor(1/16W 10Ω ±5%)	[R36,59,64,65,77,96,116]
79	VRS-CZ1JD100J	AA		C	Resistor(1/16W 10Ω ±5%)	[R118,126,127,136,137]
	VRS-CZ1JD100J	AA		C	Resistor(1/16W 10Ω ±5%)	[R149,161,170,177,185]
80	VRS-CZ1JD101J	AA		C	Resistor(1/16W 100Ω ±5%)	[R9,10,101,102,109]
	VRS-CZ1JD101J	AA		C	Resistor(1/16W 100Ω ±5%)	[R183,235,236,403]
81	VRS-CZ1JD102J	AA		C	Resistor(1/16W 1.0KΩ ±5%)	[R11,129,130,134,151,204]
	VRS-CZ1JD102J	AA		C	Resistor(1/16W 1.0KΩ ±5%)	[R205,243,244,253,268,279]
	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R12,13,15,16,18,20,44,45]
	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R60,61,62,70,72,73,86,91]
	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R93,112,115,123,131,139]
	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R144,154,158,159,160,163]
82	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R165,167,168,203,207,208]
	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R213,216,217,230,237,238]
	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R239,240,241,242,245,246]
	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R249,254,259,260,261,263]
	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R264,267,269,271,272,273]
	VRS-CZ1JD103J	AA		C	Resistor(1/16W 10KΩ ±5%)	[R274,282,283,284,285]
83	VRS-CZ1JD183J	AA		C	Resistor(1/16W 18KΩ ±5%)	[R275,280]
	VRS-CZ1JD220J	AA		C	Resistor(1/16W 22Ω ±5%)	[R14,17,19,24,27,30,31,34]
84	VRS-CZ1JD220J	AA		C	Resistor(1/16W 22Ω ±5%)	[R35,37,39,40,43,46,51,54]
	VRS-CZ1JD220J	AA		C	Resistor(1/16W 22Ω ±5%)	[R57,247,252]
85	VRS-CZ1JD221J	AA		C	Resistor(1/16W 220Ω ±5%)	[R180,181,404]
86	VRS-CZ1JD222J	AA		C	Resistor(1/16W 2.2KΩ ±5%)	[R199,200,209,210,211,212]
	VRS-CZ1JD222J	AA		C	Resistor(1/16W 2.2KΩ ±5%)	[R218,223,248,265,266,276]
	VRS-CZ1JD330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R25,38,41,47,48,52,56,58]
	VRS-CZ1JD330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R66,67,68,69,92,117,138]
87	VRS-CZ1JD330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R142,143,147,148,152,153]
	VRS-CZ1JD330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R173~176,187,188]
	VRS-CZ1JD330J	AA		C	Resistor(1/16W 33Ω ±5%)	[R214,288,289]
88	VRS-CZ1JD332J	AA		C	Resistor(1/16W 3.3KΩ ±5%)	[R119,215]
89	VRS-CZ1JD333J	AA		C	Resistor(1/16W 33KΩ ±5%)	[R107,179]
90	VRS-CZ1JD470J	AA		C	Resistor(1/16W 47Ω ±5%)	[R53,55,308,309]
	VRS-CZ1JD472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R63,71,74,76,87,100,111]
	VRS-CZ1JD472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R121,122,124,128,133,146]
91	VRS-CZ1JD472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R162,164,184,206,221,224]
	VRS-CZ1JD472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R226,227,228,231,250,251]
	VRS-CZ1JD472J	AA		C	Resistor(1/16W 4.7KΩ ±5%)	[R262,270,277]
92	VRS-CZ1JD511J	AA		C	Resistor(1/16W 510Ω ±5%)	[R278]
93	VRS-CZ1JD750J	AA		C	Resistor(1/16W 75Ω ±5%)	[R114,145]
94	VRS-CZ1JD823J	AA		C	Resistor(1/16W 82KΩ ±5%)	[R202]
95	VSDTC114EK/-1	AB		B	Transistor(DTC114EK)	[Q3]
96	VSDTC114YK/-1	AC		B	Transistor(DTC114YK)	[Q4]
97	VSUPA502T//-1	AD		B	Transistor(UPA502T)	[Q5,6,7]

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PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK	
【C】					
CDSKA0005FC39	17- 12	AM		D	
CHLDZ1473DS51	10-501	BH		E	
CPLTM6048DS51	9- 3	AL		E	
CPNLH0020QS41	1- 26	AK	N	D	
CPNLH0020QS42	1- 26	AK	N	D	
CPWBN1515FCE2	15- 26	BY	N	E	
〃	18-901	BY	N	E	
【D】					
DUNT-7093DS15	12- 21	CD	N	E	
【G】					
GCAB-0940FCZ2	1- 5	BA		D	
【H】					
HPNLC0243FCZ1	1- 11	AP		D	
【L】					
LANGT1407FCZ2	2- 13	AR		C	
LDAiU0626FCZ2	8- 14	AK		C	
LPLTM5765FCZ1	12- 35	AH		C	
LPLTM6022FCZZ	11- 29	AC		C	
LSTYM0255FCZ1	14- 56	AL		C	
LX-BZ0147FCZ1	2- 3	AC		C	
LX-BZ0589FCZZ	3- 38	AA		C	
LX-BZ0656FCZ1	10- 26	AE		C	
LX-BZ0670FCZ1	4- 25	AC		C	
LX-BZ0788FCZ1	4- 67	AC		C	
LX-BZ0828FCZZ	12- 56	AD		C	
LX-BZ0921FCZ1	12- 25	AE		C	
LX-WZ0440FCZZ	10- 57	AC		C	
【M】					
MSPRC2954FCZ2	10- 47	AB		C	
MSPRC3010FCZ1	10- 16	AB		C	
【N】					
NBLTH0327FCZ1	8- 38	AL		C	
NBLTH0350FCZ1	8- 47	AH		C	
NFANP0069FCZZ	12- 12	AV		B	
〃	12- 5	AV		B	
〃	14- 1	AV		B	
〃	2- 27	AV		B	
〃	8- 5	AV		B	
NSFTZ2576FCZ1	4- 71	AL		C	
【P】					
PBRSS0208FCZ1	8- 62	AH		C	
PCAPH0010GCZZ	26- 1	AD		C	
〃	27- 1	AD		C	
PCOVP1468FCZZ	26- 2	AD		C	
〃	27- 2	AD		C	
PCOVP1546FCZ1	7- 11	AY		C	
PCOVP1555FCZ1	12- 9	AE		C	
PCOVP1557FCZZ	12- 38	AC		C	
PCOVP1560FCZZ	12- 37	AC		C	
PCOVP1693FCZZ	14- 55	AH		C	
PDUC-0165FCZ1	12- 1	AF		C	
PGiDH1833FCZ1	16- 25	AC	N	C	
PGiDM1896FCZ1	8- 10	AV		C	
PMLT-1238FCZ1	10- 48	AC		C	
PMLT-1241FCZ1	11- 48	AA		C	
PMLT-1244FCZ1	11- 49	AC		C	
PMLT-1245FCZ2	10- 8	AE		C	
PMLT-1296FCZZ	11- 56	AH		C	
PRNGF0106FCZ2	10- 45	AC		C	
PSHEP4925FCZZ	3- 11	AC		C	
PSHEP4927FCZZ	17- 13	AM		D	
PSHEP4945FCZZ	12- 45	AC		C	
PSHEP4962FCZ1	8- 66	AC		C	
PSHEP5009FCZZ	12- 57	AC		C	
PSHEZ4873FCZ1	14- 7	AC		C	
PSHEZ4874FCZ1	14- 5	AC		C	
PSHEZ4885FCZ1	14- 37	AB		C	
PSPAZ1431FCZZ	10- 59	AA		C	
PSPAZ1432FCZZ	10- 60	AA		C	
PTME-0279FCZ1	2- 16	AB		C	
PTME-0282FCZ1	7- 3	AH		C	
PTME-0287FCZ1	2- 9	AD		C	
PTPE-0243FCZ1	16- 20	AC		C	
【Q】					
QCNCM0670FCZZ	18- 1	AC		C	
QCNCM0878FCZZ	18- 2	AF		C	
QCNCM0923FC24	18- 3	AF		C	
QCNCM0923FC32	18- 4	AG		C	
QCNCM1069ACZZ	18- 5	AD		C	
QCNCM1143FCZZ	18- 6	AG		C	
QCNCM1144FCZZ	18- 7	AH		C	
QCNCM1146FCZZ	26- 4	AE		C	
〃	27- 3	AE		C	
QCNCM1175FCZZ	18- 8	AG		C	
QCNCM1182FCZZ	26- 5	AM		C	
〃	27- 4	AM		C	
QCNCM1183FCZZ	26- 3	AM		C	
〃	27- 5	AM		C	
QCNCM5093SC0B	18- 9	AB		C	
QCNCM7014SC0H	18- 10	AB		C	
QCNCM7014SC1A	18- 11	AC		C	
QCNCM7014SC1D	18- 12	AC		C	
QCNCW0002ESZZ	18- 13	AC		C	
QCNCW0946FCZZ	26- 6	AH		C	
〃	27- 6	AH		C	
QCNCW1136FCZZ	18- 14	AC		C	
QCNCW1139FCZZ	18- 15	AC		C	
QCNCW1140FCZZ	18- 16	AD		C	
QCNCW1147FCZZ	26- 7	AL		C	
〃	27- 7	AL		C	
QCNCW1149FCZZ	26- 8	AN		C	
〃	27- 8	AN		C	
QCNCW1150FCZZ	18- 17	AE		C	
QCNW-0201FCZZ	12- 14	AG		C	
QCNW-0203FCZZ	15- 56	AD		C	
QCNW-0204FCZZ	15- 55	AC		C	
QCNW-0205FCZZ	15- 54	AC		C	
QFS-D132CQCZZ	26- 9	AG		A	
〃	27- 9	AG		A	
QFSHB0028FCZZ	26- 10	AC		C	
〃	27- 10	AC		C	
QPiN-0003GCZZ	26- 11	AC		C	
〃	27- 11	AC		C	
QSOCZ0001QSZZ	26- 12	AL		C	
〃	27- 12	AL		C	
QSOCZ0002QSZZ	18- 18	AD		C	
QSOCZ0071FCZZ	18- 19	AP		C	
QSOCZ0073FCNA	26- 13	AL		C	
〃	27- 13	AL		C	
QSOCZ6428ACZZ	26- 14	AE		C	
〃	27- 14	AE		C	
QSW-P0005QSZZ	18- 20	AC		B	
【R】					
RCRSP6676RCZZ	26- 15	AG		B	
〃	27- 15	AG		B	
RCRSZ0001QSZZ	18- 21	AG		B	
RCRUA0005FCZZ	26- 16	AP		B	
〃	27- 16	AP		B	
RCRUA0007FCZZ	26- 17	AP		B	
〃	27- 17	AP		B	
RCRUA0008FCZZ	26- 18	AP		B	
〃	27- 18	AP		B	
RCRUA0009FCZZ	26- 19	AP		B	
〃	27- 19	AP		B	
RCRUA0012FCZZ	26- 20	AP		B	
〃	27- 20	AP		B	
RCRUA0014FCZZ	26- 21	AP		B	
〃	27- 21	AP		B	
RCRUB0002FCZZ	18- 22	AP		B	
RFiLN0042FCZZ	18- 23	AC		C	
RFiLN0047FCZZ	18- 24	AC		C	
RFiLN0048FCZZ	26- 22	AC		C	
〃	27- 22	AC		C	
RFiLN0051FCZZ	26- 23	AC		C	
〃	27- 23	AC		C	
RMPTR4100ACZZ	26- 24	AB		B	
〃	27- 24	AB		B	
RMPTR4103ACZZ	18- 25	AB		B	
〃	26- 25	AB		B	
〃	27- 25	AB		B	
RMPTR4330ACZZ	26- 26	AB		B	
〃	27- 26	AB		B	
RMPTR4472ACZZ	26- 27	AB		B	
〃	27- 27	AB		B	
RPLU-0326FCZ2	15- 6	AN		B	
【S】					
SPAKA6272FCZZ	17- 28	AG		D	
SPAKC6122DS45	17- 5		N	D	
SPAKC6122DS46	17- 5		N	D	

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【T】					
TCADZ1521FCZ1	17- 6	AE		D	
TiNSE2288FCZZ	17- 20	AZ	N	D	
TiNSE2290FCZZ	17- 20	AU	N	D	
TiNSE2292FCZZ	17- 20	AN		D	
TiNSE2294FCZZ	17- 20	AK	N	D	
TiNSE2295FCZZ	17- 20	AK	N	D	
TiNSE2297FCZZ	17- 20	AN		D	
TiNSF2289FCZZ	17- 20		N	D	
TiNSF2291FCZZ	17- 20		N	D	
TiNSF2293FCZZ	17- 20	AN		D	
TiNSF2296FCZZ	17- 20		N	D	
【U】					
UBATi0014FCZZ	26- 28	AN		B	
〃	27- 28	AN		B	
【V】					
VCCCCZ1HH100D	18- 26	AA		C	
VCCCCZ1HH101J	18- 27	AA		C	
〃	26- 29	AA		C	
〃	27- 29	AA		C	
VCCCCZ1HH220J	18- 28	AA		C	
〃	26- 30	AA		C	
〃	27- 30	AA		C	
VCEAGA0JW107M	18- 29	AC		C	
VCEAGA1AW477M	18- 31	AB		C	
VCEAGA1CW477M	18- 32	AB		C	
VCEAGA1VW106M	18- 34	AA		C	
VCEAGA1VW227M	18- 36	AB		C	
VCEAGU1AW476M	18- 30	AA		C	
VCEAGU1HW335M	18- 33	AA		C	
VCEAGU1VW107M	18- 35	AB		C	
VCEAGU1VW476M	18- 37	AB		C	
VCEAPH1HC105M	26- 31	AC		C	
〃	27- 31	AC		C	
VCEAPS1AC227M	26- 32	AD		C	
〃	27- 32	AD		C	
VCEAPS1CC106M	26- 33	AC		C	
〃	27- 33	AC		C	
VCEAPS1CC226M	26- 34	AC		C	
〃	27- 34	AC		C	
VCEAPS1CC476M	26- 35	AC		C	
〃	27- 35	AC		C	
VCKYCZ1CF104Z	18- 38	AB		C	
〃	26- 36	AB		C	
〃	27- 36	AB		C	
VCKYCZ1EF223Z	18- 39	AA		C	
VCKYCZ1HB102K	18- 40	AA		C	
〃	26- 37	AA		C	
〃	27- 37	AA		C	
VCKYCZ1HB222K	18- 41	AA		C	
VCKYCZ1HF103Z	26- 38	AA		C	
〃	27- 38	AA		C	
VCQYNU1HM103K	18- 42	AA		C	
VHDDA204K//-1	18- 45	AC		B	
VHDDAN202K/-1	18- 43	AB		B	
VHDDAP202K/-1	18- 44	AB		B	
VHDDAP202U/-1	26- 39	AB		B	
〃	27- 39	AB		B	
VHDDSS133//-1	18- 46	AA		B	
VHDM1FL20U+-1	18- 48	AC		B	
VHDMA704A//-1	18- 47	AC		B	
VHDRB451F//-1	26- 40	AD		B	
〃	27- 40	AD		B	
VHDRLS73///-1	26- 41	AA		B	
〃	27- 41	AA		B	
VHEHZS3B3//-1	18- 49	AB		B	
VHERD22FB//-1	18- 50	AD		B	
VHi28F081L06F	15- 58	BE		B	
VHi28F322L03F	12- 54	BR		B	
VHi28F322L04F	12- 55	BR		B	
VHi28F322L15F	12- 54	BU		B	
VHi28F322L16F	12- 55	BU		B	
VHi65946P07-1	26- 42	BA		B	
〃	27- 42	BA		B	
VHi74LCX08MTC	26- 43	AE		B	
〃	27- 43	AE		B	
VHi74LCX14MTC	26- 44	AE		B	
〃	27- 44	AE		B	
VHi74LCX244MT	26- 45	AG		B	
〃	27- 45	AG		B	
VHi74LCX32MTC	26- 46	AE		B	

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VHi74LCX32MTC	27- 46	AE		B	
VHi74LVX16128	26- 47	AP		B	
〃	27- 47	AP		B	
VHi74VHCT240X	18- 63	AF		B	
VHi74VHCT244X	18- 64	AF		B	
VHi90LV17AW-1	26- 48	AP		B	
〃	27- 48	AP		B	
VHiD82805GN-1	18- 51	BA		B	
VHiDS14C238//	26- 49	AT		B	
〃	27- 49	AT		B	
VHiEEP64-120P	26- 50	AW		B	
〃	27- 50	AW		B	
VHiEES04L400P	18- 52	AG		B	
VHiFS781BZB-1	18- 53	AP		B	
〃	18- 54	AP		B	
VHiH8S2322R-1	18- 54	AZ		B	
VHiHG73C095-1	26- 51	AY		B	
〃	27- 51	AY		B	
VHiKS0U1347-1	26- 52	BN		B	
〃	27- 52	BN		B	
VHiLCX157MT-1	26- 53	AG		B	
〃	27- 53	AG		B	
VHiLCX16244-1	26- 54	AM		B	
〃	27- 54	AM		B	
VHiLCX16245-1	26- 55	AM		B	
〃	27- 55	AM		B	
VHiLCX16373-1	26- 56	AM		B	
〃	27- 56	AM		B	
VHiLCX74MTC-1	26- 57	AE		B	
〃	27- 57	AE		B	
VHiLM324D++-1	18- 55	AE		B	
VHiLM339D++-1	18- 56	AE		B	
VHiLM393D++-1	26- 58	AE		B	
〃	27- 58	AE		B	
VHiLVT240MT-1	26- 59	AL		B	
〃	27- 59	AL		B	
VHiLVX240SJ-1	18- 57	AG		B	
VHiM87J4810-1	26- 60	BK		B	
〃	27- 60	BK		B	
VHiMTD13611-1	18- 58	AR		B	
VHiN2370R04-1	26- 61	AF		B	
〃	27- 61	AF		B	
VHiN2370R33-1	26- 62	AF		B	
〃	27- 62	AF		B	
VHiN2391D25-1	26- 63	AG		B	
〃	27- 63	AG		B	
VHiNJM317DL-1	26- 64	AK		B	
〃	27- 64	AK		B	
VHiNJM7805A-1	18- 59	AH		B	
VHiNJU6356E-1	26- 65	AK		B	
〃	27- 65	AK		B	
VHiPi6C2309-1	26- 66	AR		B	
〃	27- 66	AR		B	
VHiPM2500++-1	26- 67	BP		B	
〃	27- 67	BP		B	
VHiPST598DN-1	26- 68	AF		B	
〃	27- 68	AF		B	
VHiPST598iN-1	26- 69	AF		B	
〃	27- 69	AF		B	
VHiSD4M16L1-1	26- 70	AZ		B	
〃	27- 70	AZ		B	
VHiSD8M16L1-1	26- 71	BB		B	
〃	27- 71	BB		B	
VHiSR1024-7LL	26- 72	AU		B	
〃	27- 72	AU		B	
VHiT4955A20-1	26- 73	BF		B	
〃	27- 73	BF		B	
VHiTA7291S/-1	18- 60	AF		B	
VHiTD62003AP1	18- 61	AG		B	
VHiTD62503F/-	18- 62	AG		B	
VHiTD62503F-1	26- 74	AF		B	
〃	27- 74	AF		B	
VHP1LHEE-002A	18- 65	AC		B	
〃	26- 75	AC		B	
〃	27- 75	AC		B	
VHV1608C2701C	26- 76	AC		B	
〃	27- 76	AC		B	
VHViCPS1.2/-1	18- 66	AF		B	
〃	26- 77	AF		B	
〃	27- 77	AF		B	
VRD-HT2EY911J	18- 67	AA		C	

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VRD-HT2HY242J	18- 68	AA		C	
VRD-HT2HY471J	18- 69	AA		C	
VRS-CZ1JD000J	18- 70	AA		C	
〃	26- 78	AA		C	
〃	27- 78	AA		C	
VRS-CZ1JD100J	26- 79	AA		C	
〃	27- 79	AA		C	
VRS-CZ1JD101J	18- 71	AA		C	
〃	26- 80	AA		C	
〃	27- 80	AA		C	
VRS-CZ1JD102J	18- 72	AA		C	
〃	26- 81	AA		C	
〃	27- 81	AA		C	
VRS-CZ1JD103F	18- 73	AA		C	
VRS-CZ1JD103J	18- 74	AA		C	
〃	26- 82	AA		C	
〃	27- 82	AA		C	
VRS-CZ1JD104J	18- 75	AA		C	
VRS-CZ1JD122J	18- 76	AA		C	
VRS-CZ1JD151J	18- 77	AA		C	
VRS-CZ1JD152F	18- 78	AA		C	
VRS-CZ1JD152J	18- 79	AA		C	
VRS-CZ1JD153F	18- 80	AB		C	
VRS-CZ1JD183J	26- 83	AA		C	
〃	27- 83	AA		C	
VRS-CZ1JD201J	18- 81	AA		C	
VRS-CZ1JD203J	18- 82	AA		C	
VRS-CZ1JD220J	26- 84	AA		C	
〃	27- 84	AA		C	
VRS-CZ1JD221J	26- 85	AA		C	
〃	27- 85	AA		C	
VRS-CZ1JD222J	26- 86	AA		C	
〃	27- 86	AA		C	
VRS-CZ1JD304F	18- 83	AA		C	
VRS-CZ1JD330J	18- 84	AA		C	
〃	26- 87	AA		C	
〃	27- 87	AA		C	
VRS-CZ1JD332J	18- 85	AA		C	
〃	26- 88	AA		C	
〃	27- 88	AA		C	
VRS-CZ1JD333J	26- 89	AA		C	
〃	27- 89	AA		C	
VRS-CZ1JD470J	26- 90	AA		C	
〃	27- 90	AA		C	
VRS-CZ1JD471J	18- 86	AA		C	
VRS-CZ1JD472F	18- 87	AA		C	
VRS-CZ1JD472J	26- 91	AA		C	
〃	27- 91	AA		C	
VRS-CZ1JD473F	18- 88	AA		C	
VRS-CZ1JD473J	18- 89	AA		C	
VRS-CZ1JD511J	26- 92	AA		C	
〃	27- 92	AA		C	
VRS-CZ1JD562J	18- 90	AA		C	
VRS-CZ1JD621F	18- 91	AA		C	
VRS-CZ1JD680J	18- 92	AA		C	
VRS-CZ1JD681F	18- 93	AA		C	
VRS-CZ1JD681J	18- 94	AA		C	
VRS-CZ1JD750J	26- 93	AA		C	
〃	27- 93	AA		C	
VRS-CZ1JD752J	18- 95	AA		C	
VRS-CZ1JD822F	18- 96	AA		C	
VRS-CZ1JD823J	26- 94	AA		C	
〃	27- 94	AA		C	
VRS-RE3AA241J	18- 97	AC		C	
VRS-RE3DA1R0J	18- 98	AB		C	
VRS-RE3DA8R2J	18- 99	AC		C	
VRS-RE3LA6R2J	20- 9	AC		C	
VS2SK3018++-1	18-103	AC		B	
VSDTA123YK/-1	18-100	AB		B	
VSDTC114EK/-1	26- 95	AB		B	
〃	27- 95	AB		B	
VSDTC114YK/-1	18-101	AC		B	
〃	26- 96	AC		B	
〃	27- 96	AC		B	
VSDTD114EK/-1	18-102	AC		B	
VSUPA502T//-1	26- 97	AD		B	
〃	27- 97	AD		B	
【X】					
XBBSD30P06000	12- 51	AA		C	
XBBSD30P08000	10- 24	AA		C	
XBPSD26P06000	12- 26	AA		C	

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK	
XBPSD30P06000	12- 47	AA		C	
XHBSE30P06000	12- 50	AA		C	
XHBSE40P08000	14- 4	AA		C	

CAUTION FOR BATTERY REPLACEMENT

(Danish) ADVARSEL !

Lithiumbatteri – Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri
af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandoren.

(English) Caution !

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type
recommended by the manufacturer.
Dispose of used batteries according to manufacturer's instructions.

(Finnish) VAROITUS

Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan
tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden
mukaisesti.

(French) ATTENTION

Il y a danger d'explosion s' il y a remplacement incorrect
de la batterie. Remplacer uniquement avec une batterie du
même type ou d'un type équivalent recommandé par
le constructeur.
Mettre au rebut les batteries usagées conformément aux
instructions du fabricant.

(Swedish) VARNING

Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent
typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens
instruktion.

(German) Achtung

Explosionsgefahr bei Verwendung inkorrekter Batterien.
Als Ersatzbatterien dürfen nur Batterien vom gleichen Typ oder
vom Hersteller empfohlene Batterien verwendet werden.
Entsorgung der gebrauchten Batterien nur nach den vom
Hersteller angegebenen Anweisungen.

CAUTION FOR BATTERY DISPOSAL

(For USA,CANADA)

Contains lithium-ion battery. Must be disposed of properly.
Remove the battery from the product and contact
federal or state environmental
agencies for information on recycling and disposal options.

SHARP

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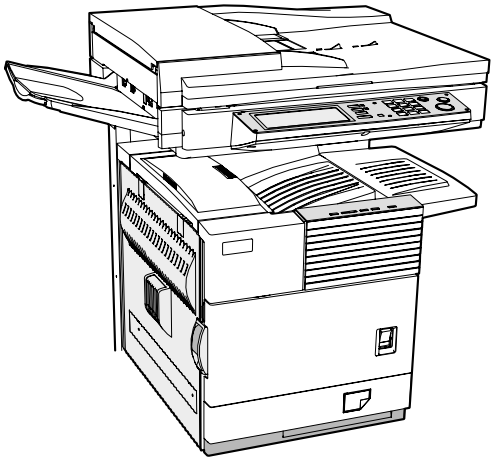
SHARP SERVICE MANUAL

CODE : 00ZARM350UA1E



LASER PRINTER

MODEL AR-M350U/M450U AR-M350N/M450N

OPTIONS AR-P14

[1] INTRODUCTION

The AR-M350U/M450U and AR-M350N/M450N are minor change models based on the AR-M350/M450.
This service manual only provides information on these minor changes.
In addition to this service manual, the documents listed below are required to properly maintain these machines.

•AR-M350/M450	Service Manual : 00ZARM350/A1E	Parts Guide : 00ZARM450/P1E	Circuit Diagram : 00ZARM350/C1/
•AR-P350/P450	Service Manual : 00ZARP350/A2E	Parts Guide : 00ZAR350LPP1/	Circuit Diagram : 00ZARP350/C1/
•AR-NC5J	Service Manual : 00ZARNC5J/A1E		

Note: Depending on the option, additional service documentation may be required.

[2] LIST OF DIFFERENCES FROM AR-M350/M450

A.Product composition

	Model Name	Printer Option Model	NIC Standard Model	Note
Base Engine		AR-M350U AR-M450U	AR-M350N AR-M450N	
Print Speed		35ppm 45ppm	35ppm 45ppm	
Multi Function Controller	AR-M11	Not Available	Standard	
Multi Function Controller(for U-Model)	Not Available	Standard	Not Available	Not registered as a product
Print Server Card	AR-NC5J	Not Available	Standard	
Printer Extension Kit	AR-P14	Option	Not Available	*1

*1: Installation of the AR-P14 on the AR-M350U/M450U will provide similar functionality to that of the AR-M350/M450.

Parts marked with "⚠" are important for maintaining the safety of the set.
Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

SHARP CORPORATION

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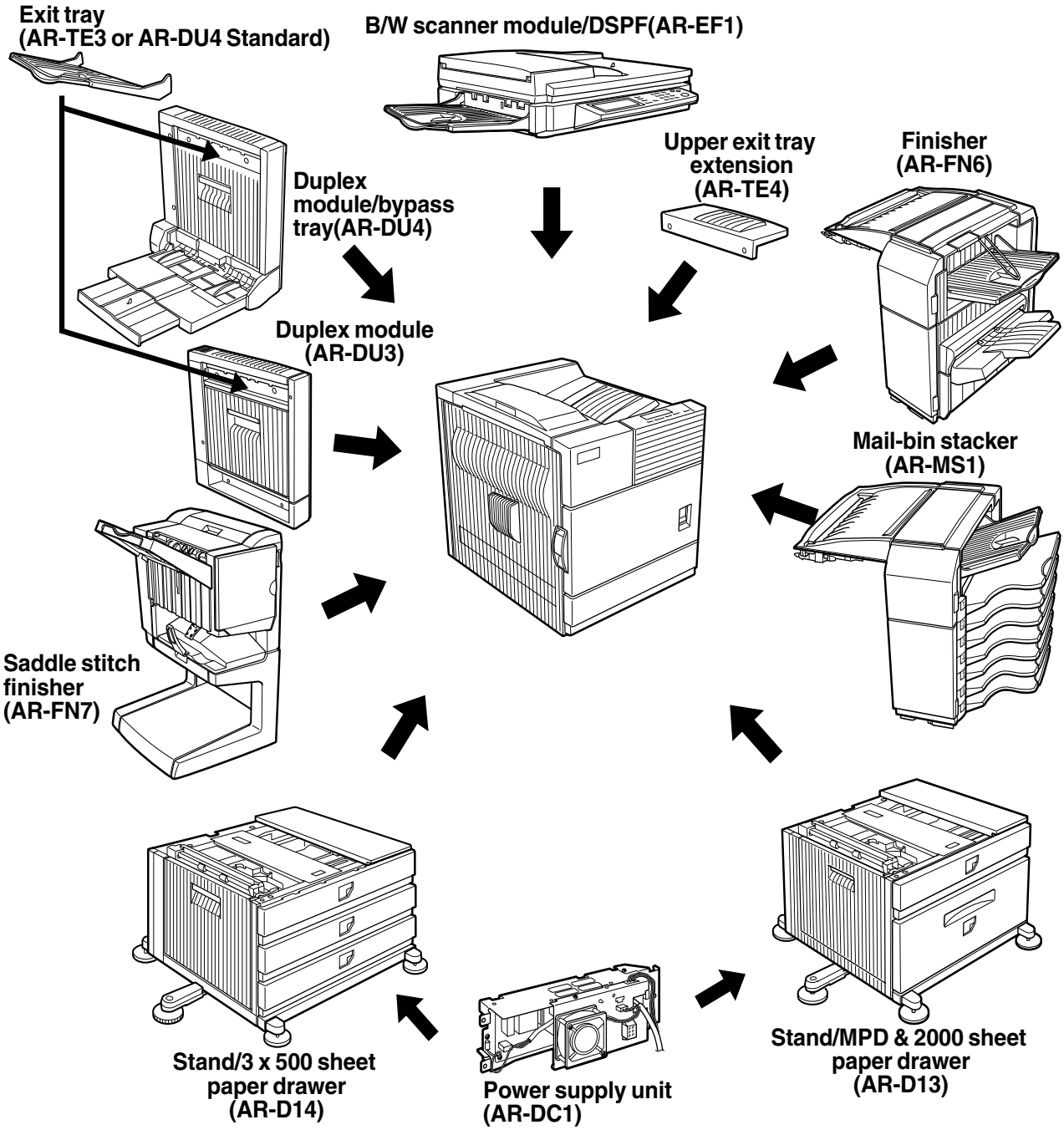
The contents are subject to change without notice.

[3] CONFIGURATION

1.System Configurations



2. Standard

Category	Model Name	Other options required for the installation/mounting. (Options must be ordered separately.)	Remarks
MFP model (35ppm)	AR-M350	• B/W Scanner module/DSPF (AR-EF1) • Scanner Rack(AR-RK1) • Stand/MPD&2000 sheet paper drawer (AR-D13) or Three paper drawer stand (AR-D14) • Power supply unit (AR-DC1)	
MFP model (45ppm)	AR-M450		
MFP model (35ppm)	AR-M350U		
MFP model (45ppm) (Without network printer function)	AR-M450U		
MFP model (35ppm) (With NIC card (standard))	AR-M350N		
MFP model (45ppm)	AR-M450N		

3. List of combination of peripheral devices

A.AR-M350U/M450U

As shown in the table below, some other peripheral devices (B) may be needed for installation of a peripheral device (A) and some peripheral devices cannot be installed together.

			B																					
			B/W scanner module/DSPF	Scanner rack	Stand/3 x 500 sheet paper drawer	Stand/MPD & 2000 sheet	Duplex module/bypass tray	Duplex module	Saddle stitch finisher	Finisher	Mail-bin stacker	Exit tray	Upper exit tray extension	Punch unit	Multi-function controller board	Print server card	PS3 expansion kit	Network scanner expansion kit	Facsimile expansion kit	Fax memory (8 MB)	Power supply unit	Hard disk drive	Network printer kit
	Related for scanner feature																						
A	B/W scanner module/DSPF	AR-EF1	—	○	○*1										○						○		
A	Scanner rack	AR-RK1	○	—	○*1										○						○		
	Related for paper feed unit																						
A	Stand/3 x 500 sheet paper drawer	AR-D14			—	×															○		
A	Stand/MPD & 2000 sheet paper drawer	AR-D13			×	—															○		
A	Duplex module/bypass tray	AR-DU4			○*1		—		×					×							○*2		
A	Duplex module	AR-DU3			○*1			—													○*2		
	Output units																						
A	Saddle stitch finisher	AR-FN7			○*1		×	○	—	×		×	×								○		
A	Finisher	AR-FN6			○*1				×	—	×		×	×							○		
A	Mail-bin stacker	AR-MS1			○*1					×	—		×								○		
A	Exit tray *4	AR-TE3					○*1		×	×	×	—		×									
A	Upper exit tray extension	AR-TE4								×	×		—										
A	Punch unit	AR-PN1			○*1		×	○	○	×		×		—							○		
	Related for extension of functions and others																						
A	PS3 expansion kit	AR-PK1															—						
A	Network scanner expansion kit	AR-NS2	○	○	○*1											○		—					
A	Facsimile expansion kit	AR-FX5	○	○		○*1													—				
A	Fax memory (8 MB)	AR-MM9	○	○		○*1													○	—	○		
A	Power supply unit	AR-DC1				○*1															—		
A	Hard disk drive	AR-HD3																				—	
A	Multi-function controller board *5	AR-M11	○	○		○*1									—								×
A	Print server card *6	AR-NC5J														—		○*1					○*1
A	Network printer kit	AR-P14														○							—

○ = Must be installed together.
○*1 = Any of the units must be installed together.
○*2 = Must be installed for installation of the stand/3 x 500 sheet paper drawer or the stand/MPD & 2000 sheet paper drawer.
× = Cannot be installed together.
*3 = Standard
*4 = AR-DU4 Standard
*5 = Attachment of the AR-P14 provides the similar functions.
*6 = Not Available

B.AR-M350N/M450N

As shown in the table below, some other peripheral devices (B) may be needed for installation of a peripheral device (A) and some peripheral devices cannot be installed together.

A			B: B/W scanner module/DSPF	Scanner rack	Stand/3 x 500 sheet paper drawer	Stand/MPD & 2000 sheet	Duplex module/bypass tray	Duplex module	Saddle stitch finisher	Finisher	Mail-bin stacker	Exit tray	Upper exit tray extension	Punch unit	Multi-function controller board	Print server card	PS3 expansion kit	Network scanner expansion kit	Facsimile expansion kit	Fax memory (8 MB)	Power supply unit	Hard disk drive	Network printer kit
Related for scanner feature																							
B/W scanner module/DSPF	AR-EF1		—	○	○*1										○						○		
Scanner rack	AR-RK1		○	—	○*1										○						○		
Related for paper feed unit																							
Stand/3 x 500 sheet paper drawer	AR-D14				—	×															○		
Stand/MPD & 2000 sheet paper drawer	AR-D13				×	—															○		
Duplex module/bypass tray	AR-DU4				○*1		—		×					×							○*2		
Duplex module	AR-DU3				○*1			—													○*2		
Output units																							
Saddle stitch finisher	AR-FN7				○*1		×	○	—	×		×	×								○		
Finisher	AR-FN6				○*1				×	—	×		×	×							○		
Mail-bin stacker	AR-MS1				○*1					×	—		×								○		
Exit tray *4	AR-TE3						○*1		×	×	×	—		×									
Upper exit tray extension	AR-TE4									×	×		—										
Punch unit	AR-PN1				○*1		×	○	○	×		×		—							○		
Related for extension of functions and others																							
PS3 expansion kit	AR-PK1																—						
Network scanner expansion kit	AR-NS2		○	○	○*1											○		—					
Facsimile expansion kit	AR-FX5		○	○	○*1														—				
Fax memory (8 MB)	AR-MM9		○	○	○*1														○	—	○		
Power supply unit	AR-DC1				○*1																—		
Hard disk drive	AR-HD3																					—	
Multi-function controller board *3	AR-M11		○	○	○*1										—								
Print server card *3	AR-NC5J															—							
Network printer kit *6	AR-P14																						—

○ = Must be installed together.
○*1 = Any of the units must be installed together.
○*2 = Must be installed for installation of the stand/3 x 500 sheet paper drawer or the stand/MPD & 2000 sheet paper drawer.
× = Cannot be installed together.
*3 = Standard
*4 = AR-DU4 Standard
*6 = Cannot be attached.

[4] SPECIFICATIONS

1. Basic Specification

A. Base Engine (AR-M350U/M350N/M450U/M450N)

(1) Form

AR-M350U/M350N/M450U/M450N	Console type

(2) Engine speed

Paper size	AR-M350U/N	AR-M450U/N
A4, 8.5" x 11"	35ppm	45ppm
A5R/5.5" x 8.5"R	35ppm	45ppm
B5	35ppm	45ppm
B4/8.5" x 14	20ppm	22ppm
A3/11" x 17"	17ppm	20ppm

(3) Engine composition

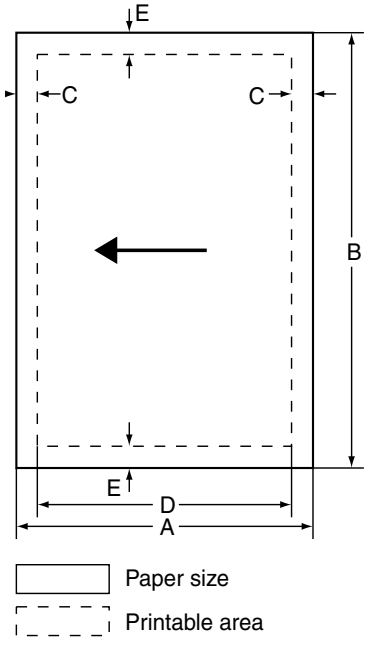
Photoconductor type	OPC (diameter of photoconductor : ø30mm)
Record method	Electrophotograph (laser)
Development method	Dry-type dual-component magnetic brush development
Charge method	Charged saw-tooth method
Transfer method	Transfer roller
Cleaning method	Counter blade
Fusing method	Heat roller
Used toner disposal	Toner recycling system

(4) Engine resolution

Resolution	Write :600dpi
Smoothing	Write :1200dpi equivalent
Gradation	Write :2 levels

(5) Printable area

The print area of this product is shown below.



If a printer driver for Windows or Macintosh is used for printing, the printable area will be smaller. The actual printable area depends on the printer driver to be used.

(in mm)

Paper size	A	B	C	D	E
A3	297	420	4	289	4
B4	257	364	4	242	4
A4	210	297	4	202	4
B5	182	257	4	168	4
A5	148	210	4	140	4
Japanese postcard	100	148	4	92	4
Ledger	279	432	4	271	4
Legal	216	356	4	208	4
Foolscap	216	330	4	208	4
Letter	216	279	4	208	4
Executive	184	267	4	183	4
Invoice	140	216	4	132	4
Com-10(envelope)	105	241	4	97	4
C5(envelope)	162	229	4	154	4
Monarch(envelope)	98	191	4	90	4
DL(envelope)	110	220	4	102	4
ISO B5(envelope)	176	250	4	168	4

(6) Warm-up

Warm-up time	less than 80 seconds
Pre-heat requirement	Required
Jam recovery time	Target: about 30 seconds (Under standard condition of 60 seconds left after side cover opening, polygon motor halt)

(7) Power source

Voltage	100V system	200V system
	100-127V	220-240V
Frequency	50/60Hz	50/60Hz

(8) Power consumption

	AR-M350U/N	AR-M450U/N
Max. Power consump.	1440W	1440W

(9) Energy Star benchmark

	AR-M350U/N	AR-M450U/N
Low power mode	40W	75W
Transition time to Low power mode	60min	60min

(10) Noise

	AR-M350U/N	AR-M450U/N
At working	less than 6.8B	less than 6.8B
At waiting mode	less than 5.0B	less than 5.0B

* Showing noise benchmark in each model as a whole system.

(11) Dimensions

External dimensions (WxDxH)	428x552x469 (Only main unit) (mm) 16.9"x21.7"x18.5"
Occupied space dimensions (WxD)	963x685 (mm) *1 25.7"x22.3"
Weight	AR-M350U/M450U:Approx.38.9kg (Only main unit) Approx.99kg *1 AR-M350N/M450N:Approx.39.9kg (Only main unit) Approx.100kg *1

*1: With B/W scanner module/DSPF, Scanner rack, Large capacity paper feed desk, Power supply unit and Upper exit tray extension

B. Document Feeding Equipment

(1) One-drawer tray (included in the base engine)

Paper feed method	One-drawer tray	
Sizes to be fed	A4, B5, 8.5" x 11"	
Paper capacity	500 sheets (at 80g/m²)	
Media available for paper feeding	Plain paper 60 - 105g/m², 16 - 28lbs	
Paper type	Plain, recycled, pre-printed, pre-punched, color, letter head	
Paper size switching	To be switched by user (paper size to be entered from the operation panel).	
Dehumidification heater	Not provided	
Balance detection	Provided (paper empty and 3 steps)	
Default size setting	100V system	200V system
	8.5" x 11"	A4
Mounting/demounting of the tray	Provided	

C. Output Equipment

(1) Face-down Exit Tray (included in the base engine)

Output position/ method	Face-down output at the upper side of main unit
Output paper capacity	400 sheets (80g/m² sheet)
Output paper size	A3, B4, A4, A4R, B5, B5R, A5R 11 " x 17", 8.5" x 14", 8.5" x 13", 8.5" x 11 ", 8.5" x 11 "R, 5.5" x 8.5"R Executive, postal card, Monarch (98 x 191) Com-10 (105 x 241), DL (110 x 220), C5 (162 x 229), ISO B5 (176 x 250)
Spec of media for paper output	Tracing paper : 52 ~ 59g/m² / 14 ~ 15lbs Plain paper : 60 ~ 128g/m² / 16 ~ 34lbs Index paper : 176g/m² / 47lbs Cover paper : 205g/m² / 54 ~ 55lbs Transparency firm
Remaining paper detection	Not provided
Exit tray full detection	Provided

2. Specific Function

A. Printer Function

(1) Platform

IBM PC/AT (Include compatible machine) Macintosh (680x0), Power Macintosh, iMac, G3Macintosh

* For Macintosh OS, the PS3 expansion kit and NIC card are required.

(2) Support OS

Custom PS	Windows 95/98/Me/XP
	Windows NT 4.0 Windows 2000
Custom PCL5e/6(XL) SPDL	Windows 95/98/Me/XP
	Windows NT 4.0 Windows 2000
PPD	Windows 95/98/Me/XP
	Windows NT 4.0 Windows 2000
	Mac OS 8.5.1 - Mac OS 9

* For Macintosh OS, the PS3 expansion kit and NIC card are required.

(3) PDL emulation

PCL6, PCL5e compatible, PostScript Level 2, PostScript 3 compatible (PS3 expansion kit is required.)

(4) Print Function

a. General

		When an optional PS3 expansion kit is installed		
Function	PCL5e/ PCL6	PS	PPD (Windows)	PPD (Macintosh)
Copies	1 - 999	1 - 999	1 - 999	1 - 999
Orientation	Yes	Yes	Yes	Yes
Duplex print	Yes	Yes	Yes	Yes
Saddle stitch	Yes	Yes	No	N/A
Binding edge	Left/top/ right	Left/top/ right	Long/short	Long/short
N-up	2/4/6/8	2/4/6/8	2/4*3*4	2/4/6/9/16
N-up direction	Fixed	Fixed	Fixed	Selectable
N-up border line	Yes	Yes	Yes(always)	Yes

b. Paper input

		When an optional PS3 expansion kit is installed		
Function	PCL5e/ PCL6	PS	PPD (Windows)	PPD (Macintosh)
Paper size	Yes	Yes	Yes	Yes
Custom paper size	1 size	1 size	3 sizes*3*5	N/A
Source selection	Yes	Yes	Yes	Yes
Different first page	Yes	Yes	N/A	Yes
Transparency inserts	Yes	Yes	N/A	Yes

c. Paper output

		When an optional PS3 expansion kit is installed		
Function	PCL5e/ PCL6	PS	PPD (Windows)	PPD (Macintosh)
Output tray selection	Yes	Yes	Yes	Yes
Mail bin	Yes	Yes	Yes	Yes
Staple	Yes	Yes	Yes	Yes
Offset	Yes	Yes	Yes	Yes
Punch	Yes	Yes	Yes	Yes

d. Graphic

		When an optional PS3 expansion kit is installed		
Function	PCL5e/ PCL6	PS	PPD (Windows)	PPD (Macintosh)
Resolution	600/300 dpi	600 dpi	600 dpi	600 dpi
Halftone	N/A	Yes	Yes	N/A
Graphic mode	Yes	N/A	N/A	N/A
Smoothing	Yes	Yes	Yes	Yes
Toner save	Yes	Yes	Yes	Yes
Photo enhancement	Yes*8	Yes	N/A	N/A
Negative image	N/A	Yes	Yes	Yes
Mirror image	N/A	Horizontal/ vertical	Horizontal	Yes
Zoom	N/A	N/A	Yes	Yes
Fit to page	Yes	Yes	N/A	N/A

e. Font

		When an optional PS3 expansion kit is installed		
Function	PCL5e/ PCL6	PS	PPD (Windows)	PPD (Macintosh)
Resident font	45 fonts	136 fonts	136 fonts*6	35 fonts
Download font	Bitmap TrueType, Graphic	Bitmap Type1 TrueType	Bitmap Type1 TrueType	N/A

f. Others

		When an optional PS3 expansion kit is installed		
Function	PCL5e/ PCL6	PS	PPD (Windows)	PPD (Macintosh)
Watermark*7	Yes	Yes	Yes	Yes
Overlay	Yes	Yes	N/A	N/A
Job retention*1	Yes	Yes	N/A	Yes
Account control	Yes	Yes	N/A	Yes
Custom settings	Yes	Yes	N/A	N/A
Automatic configuration*2	Yes	Yes	N/A	Yes
Job end notification	Yes	Yes	N/A	N/A

* 1 In the models without a hard disk drive, an optional hard disk drive must be installed .
* 2 Functions when peripheral devices are installed.
* 3 Not supported in the Windows NT 4.0 environment.
* 4 2/4/6/9/16 is supported in the Windows 2000 environment.
* 5 Only one size is supported in the Windows 2000 environment.
* 6 Only 35 fonts are supported in the Windows NT 4.0 environment.
* 7 This function is limited for PPD.
* 8 PCL6 only

(5) Compatibility

PCL 5e compatibility	Target for PCL5e is to be compatible with HP LaserJet 4000. Small margin difference, rendering difference by different font family, default and transfer function difference are not to be included in the compatibility. All the PJL commands are not necessarily included in the compatibility.
PCL6 compatibility	Target for PCL6 is to be compatible with HP LaserJet 4000. Small margin difference, rendering difference by different font family, default and transfer function difference are not to be included in the compatibility. All the PJL commands are not necessarily included in the compatibility.
PostScript Compatibility	Roman PostScript is targeted to be compatible with Adobe PostScript as performed in HP LaserJet 4000. Small margin difference, rendering difference by different font family, default and transfer function difference are not to be included in the compatibility.

B. Expanded RAM

Installation of an expanded RAM will avoid the following status.

1) Time out error reduction
2) Spool time reduction
3) Avoidance of VM error / memory full

Use commercially available RAM with the following specifications.
Note: If RAM used does not meet the follow specifications, the copier may not recognize the additional RAM or its capacity correctly.

<Spesification>

DIMM TYPE	168pin 3.3V Unbuffered SDRAM DIMM Non-ECC
DIMM capacity	64MByte, 128MByte, 256MByte
CAS LATENCY	CL=2
SDRAM CLOCK	For PC100, PC133
SPD	Supporting
Parity	Not support
ECC	Not support

<Operation-assured Memory> (As of March / 2001)

Manufacture	Capacity	Model name	RAM CHIP name	Note
Kingston Technology	128MB	KVR133X64C3/ 128	HYB39S64800BT -7.5	
	128MB	KVR133X64C3 -128	D456821G-A75 -9JF	
	256MB	KVR133X64C3 -256	HY57V28820AT-H	
Viking Compornents	64MB	VIK8641CL2	µPD456841G5 -A80-9JF	
	64MB	VIK8641CL2	D456841G5-A80 -9JF	
	128MB	VIK6642CL2	TC59SM708FT-80	
	128MB	VIK6642CL2	D4564841G5-A80 -9JF	
	256MB	VIK2642CL2	TC59SM708FT-80	
Memory Card Technology	64MB	DM864VS65804X -7G	GM72V66841XT75	
	128MB	DM1665VS65804 X-7G	HY57V64820HG	

C. Scanner function

*Scanner function, the NIC card and Network Scanner kit are required.

(1) Scanner function

Scanner mode	Scan to E-mail (Internet FAX) Scan to Server (Client PC)

(2) Support System

Embedded server	SMTP server FTP server
Protocol	TCP/IP

(3) Support Image

Format	TIFF, PDF, TIFF-F * Selectable for each page
Compression method	Uncompressed, G3(1-dimension) *1, G4 *2 *1 G3 (1-dimension) = MH (Modified Huffman) *2 G4 = MMR (Modified MR)

(4) Transmission Mode

DSPF/OC transmission switching	Available (Switching during the reading is not feasible)

(5) Image Process

Half tone reproduction	Equivalent to 256 levels
Exposure adjustment	Light / Auto / Dark
Quality selection	Half-tone ON/OFF
Resolution*	Normal (200x200dpi) Fine (300x300dpi) Super fine (400x400dpi) Ultra fine (600x600dpi) Varies with the file type/transmission method

(6) Original Memory

Standard	Commonly use ERDH area of memory.
Memory expansion	Special : As per ERDH memory

(7) Specified Destination

Specified destination	Specifying by one-touch or group
One-touch*	Max. 500 destinations (in conjunction with the one-touch dial of FAX) Max. 100 destinations can be registered for FTP and Desktop.
Group*	To be registered in one-touch
Program	Available

(8) Specified Multiple Destinations

Specified destination	Specifying by one-touch or group
No. of registration	Max. 300 items (in conjunction with those of FAX)
Sequential broadcasting	Available (E-mail only. It is not available for FTP/Desktop.)
Simultaneous FAX transmission	Available (Specifying multiple destinations of FAX, E-mail or FTP and broadcasting by a single scan)

O : Available

(9) Functions

Transmitting functions	Rotating transmission	Available (to be matched with FAX specification)
	Long length original transmission	Not Available
	Verification stamp function	Option
Report/list functions	Transmit/receive record	Available
	Transmit/receive result	Available
	Address/phone directory list	Available
	Group list	Available
	ID/sender list	Available
	Program list	Available

D. Copy function

(1) Copy Speed

	AR-M350U/N			AR-M450U/N		
	Actual	Reduction	Enlargement	Actual	Reduction	Enlargement
A4, 8.5"x11"	35	35	35	45	45	45
A4R, 8.5"x11"R	25	25	25	30	30	30
A5R, 5.5"x8.5"R, Invoice-R	35	35	35	45	45	45
B5	35	35	35	45	45	45
B5R, Exective-R	25	25	25	30	30	30
B4, 8.5"x14"	20	20	20	22	22	22
A3, 11"x17"	17	17	17	20	20	20
Extra, Envelope	17	17	17	20	20	20
Japan P/C	In case of printing on post card, engine speed can vary with system configuration, because next paper is fed after machine completely output previous page.					

* Figures in reduction/enlargement are represented by those at the ratio to show slowest speed

(2) First Copy Time

Conditions: A4 or 8.5"x11"P from front tray of PPC, without HDD and with polygon motor running.

	AR-M350U/N	AR-M450U/N
Document glass *1	Less than 5.3 seconds	Less than 4.6 seconds
DSPF	Less than 6.0 seconds	Less than 5.3 seconds

*1 During OC/high-speed mode

(3) Job Speed

	AR-M350U/N	AR-M450U/N
S → S *1	33 cpm (94%)	42 cpm (93%)
S → D *2	32 cpm (91%)	40 cpm (88%)
D → D *3	32 cpm (91%)	40 cpm (88%)

*1 S → S : A4 / 8.5" x 11"P original 5 sheets copy 5sets
*2 S → D : A4 / 8.5" x 11"P original 10 sheets copy 5sets
*3 D → D : A4 / 8.5" x 11"P original 5 sheets (10 pages) copy 5sets

Note: First copy time has been factored into calculation resulting in reduced CPM.

(4) Continuous Copy

Max. multiple number	999 pages

(5) Copy Ratio

Copy ratio	AB series : 25%, 70%, 81%, 86%, 100%, 115%, 122%, 141%, 400% Inch series : 25%, 64%, 77%, 100%, 121%, 129%, 400%
Zoom	25 - 400% 25 - 200% (Copy from DSPF)
Independent scaling	Not provided

(6) Exposure/Copy Quality Process

Exposure mode	Binary: Text(auto/manual), Text/photo, Photo 256 levels: Not provided
Manual steps	9 steps
Smoothing	Standard
Toner save mode	Standard

(7) Copy Function

Function	APS	Standard Function
	AMS	Standard Function
	Paper type select	Standard Function (By type setting)
	Auto tray switching	Standard Function
	Rotation copy	Standard Function
	Electronic sort	Standard Function
	Rotation sort	Not provided
	Reserved copy	Standard Function
	Prior tray setting	Not provided
	Recall/register of program	Standard Function
	Proof copy	Not provided
	Preheat function	Standard Function (To be set up by key operator)
	Auto power shut-off function	Standard Function (To be set up by the key operator program)
	Account control	Standard Function (100 accounts)
	Communication support (RIC)	Standard Function
	Card counter support	Only provided the connector
	Coin vendor support	Only provided the connector
Special function	Margin shift	Standard Function
	Edge erase / Center erase	Standard Function
	Dual page copying	Standard Function
	Covers	Not provided
	Transparency insert	Not provided
	Centering	Not provided
	Multi shot (N in 1)	Standard Function (2 in 1 / 4 in 1)
	Pamphlet copy	Standard Function
	2-sided copy orientation change	Standard Function
	Large capacity original mode	0 (Max. 140 pages)
	B/W reverse	Not provided
	Shading	Not provided
	Mirror image	Not provided
	Repeat	Not provided
	Date stamp	Not provided
	Stamp	Not provided
	Page stamp	Not provided
	Zaurus print	Not provided

[5] CONSUMABLE PARTS

1.Supply system table

Note: The consumable parts are the same as those of the AR-M350/M450 and the AR-P350/P450.

A.USA

NO	Name	Content		Life	Product name	Remark
1	Toner CA(Black)	Toner(Toner : Net Weight 814g)		27K	AR-450NT (*1 AR-450NT-J)	*Life setup is based on A4 6%
2	Developer	Developer(Developer : Net Weight 450g)		100K	AR-450ND	
3	Drum	Drum	x1	50K	AR-450DR	
4	50K maintenance kit	Cleaner blade	x1	50K	AR-450KC1	
		Drum separation pawl	x4			
		Screen grid	x1			
		Toner reception seal	x1			
		Side malt F	x1			
		Side malt R	x1			
		Charging plate	x1			
5	100K maintenance kit	Transfer roller	x1	100K	AR-450KA1	
		Discharging plate	x1			
		Paper dust removing unit	x1			
		DV blade	x1			
		DV side seal F	x1			
		DV side seal R	x1			
6	Upper heat roller kit	Upper heat roller	x1	200K	AR-450UH	
		Fusing separation pawl (Upper)	x4			
7	Lower heat roller kit	Lower heat roller	x1	200K	AR-450LH	
		Fusing separation pawl (Lower)	x2			
8	Cleaner blade	Cleaner blade	x10	50K(x10)	AR-450CB	AR-450CB=(AR-450BL)x10
9	Cleaning roller	Cleaning roller	x10	200K(x10)	AR-450CR	AR-450CR=(AR-450RC)x10
		Bearing	x20			
10	Staple cartridge	Staple cartridge	x3	3000x3	AR-SC1	Common with cartridge for AR-FN4 & AR-FN6
11	Staple cartridge	Staple cartridge	x3	5000x3	AR-SC2	Common with cartridge for AR-FN7

*1: For USA Government

Note1: Print on Master/individual carton:Toner/Developer in 2 languages (English/French), DR in 4 languages (English/French/German/Spanish).

Note2: Packed with machine: DR 50K/Developer UN/Process UN

Note3: The other maintenance parts which are not listed above are registered as service parts.

B.Europe

NO	Name	Content		Life	Product name	Remark
1	Toner CA(Black)	Toner(Toner : Net Weight 814g)		27K	AR-450T	*Life setup is based on A4 6%
2	Developer	Developer(Developer : Net Weight 450g)		100K	AR-450DV	
3	Drum	Drum	x1	50K	AR-450DM	
4	50K PM kit	Cleaner blade	x1	50K	AR-450KC	
		Drum separation pawl	x4			
		Screen grid	x1			
		Toner reception seal	x1			
		Side malt F	x1			
		Side malt R	x1			
		Charging plate	x1			
5	100K PM kit	Transfer roller	x1	100K	AR-450KA	
		Discharging plate	x1			
		Paper dust removing unit	x1			
		DV blade	x1			
		DV side seal F	x1			
		DV side seal R	x1			
6	200K PM kit	Upper heat roller	x1	200K	AR-450KB	
		Lower heat roller	x1			
		Fusing separation pawl (Upper)	x4			
		Fusing separation pawl (Lower)	x2			
		Cleaning roller	x1			
		Bearing	x2			
7	Staple cartridge	Staple cartridge	x3	3000x3	AR-SC1	Common with cartridge for AR-FN4 & AR-FN6
8	Staple cartridge	Staple cartridge	x3	5000x3	AR-SC2	Common with cartridge for AR-FN7

Note1: Print on Master/individual carton:4 languages (English/French/German/Spanish).

Note2: Packed with machine: DR 50K/Developer UN/Process UN

Note3: The other maintenance parts which are not listed above are registered as service parts.

2.Production number identification

A. Drum cartridge

The lot number, printed on the front side flange, is composed of 10 digits, each digit showing the following content:

1	2	3	4	5	6	7	8	9	10

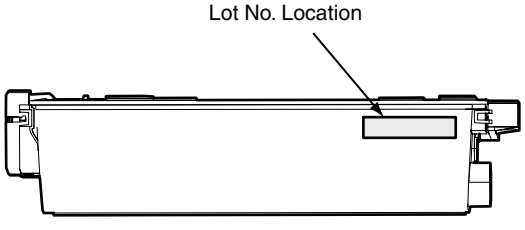
1 Number
For this model, this digit is 2.
2 Alphabet
Indicates the model conformity code. T for this model.
3 Number
Indicates the end digit of the production year.
4 Number or X, Y, Z
Indicates the production month.
X stands for October, Y November, and Z December.
5/6 Number
Indicates the production day on the month.
7 Number or X, Y, Z
Indicates the month of packing.
X stands for October, Y November, and Z December.
8/9 Number
Indicates the day of the month of packing.
10 Alphabet
Indicates the production factory. "A" for Nara Plant.

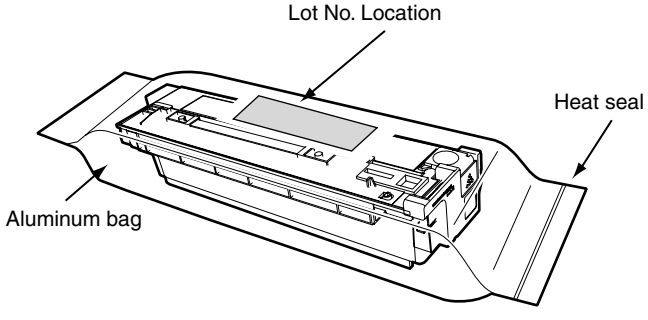
B. Toner cartridge

The lot number is composed of 7 digits, and each digit indicates as following.
The lot number shall is printed in the position shown below.

1	2	3	4	5	6	7

1 Version number (A - sequentially revised)
2 Numeral figure
Indicates the end digit of the production year.
3 Alphabet
Indicates the production factory. (B for SOCC)
4 Destination code
5,6 Numeral figures
Indicates the production day.
7 Numeral figure or X, Y, Z
Indicates the production month.
X stands for October, Y November, and Z December.





C. Developer

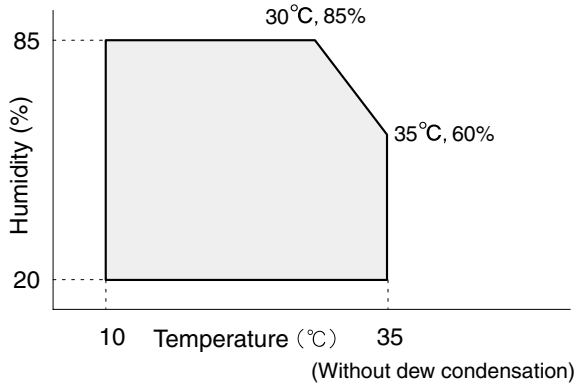
The lot number is composed of 8 digit, and each digit indicates as following.
The lot number shall be printed on the bag.

1	2	3	4	5	6	7	8

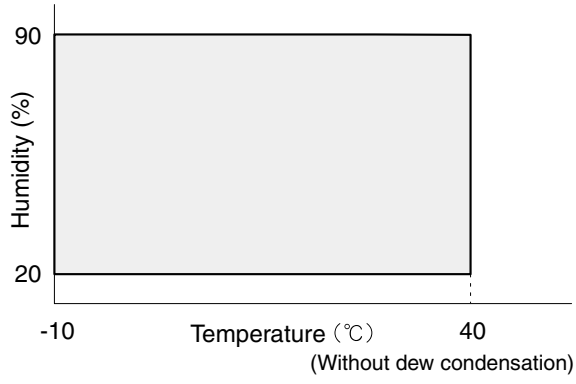
1 Alphabet
Indicates the production factory.
2 Figure
Indicates the production year.
3/4 Figure
Indicates the production month.
5/6 Figure
Indicates the production day.
7 Hyphenation
8 Figure
Indicates the production lot.

3. Environmental conditions

A. Operating conditions



B. Storage conditions

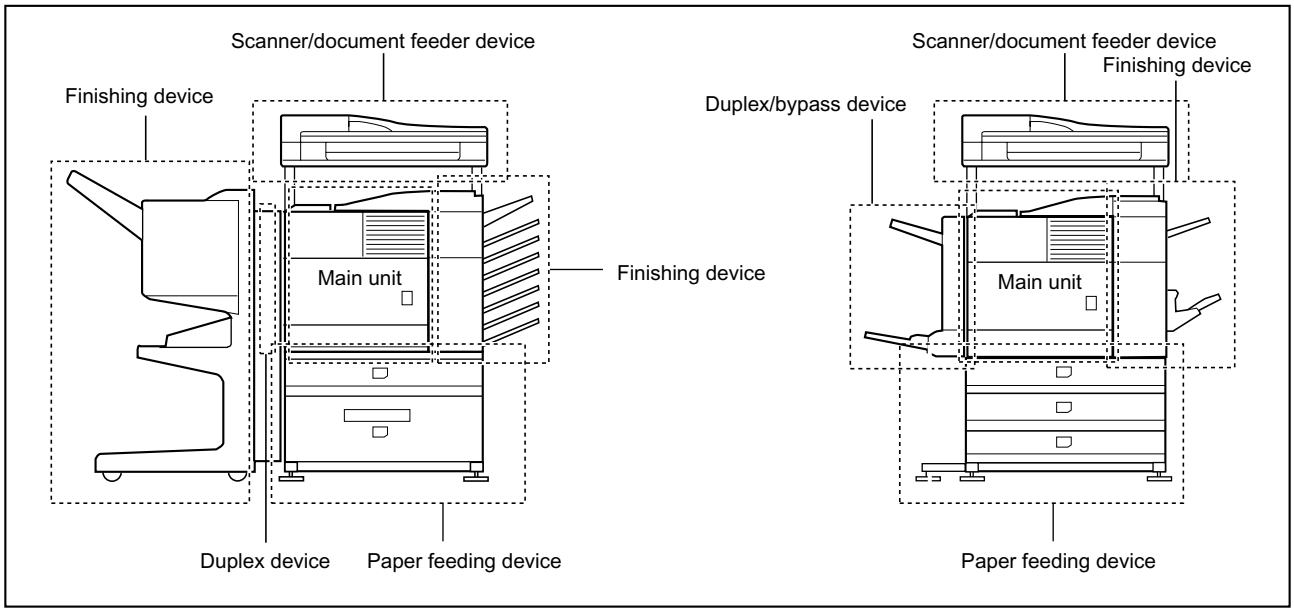


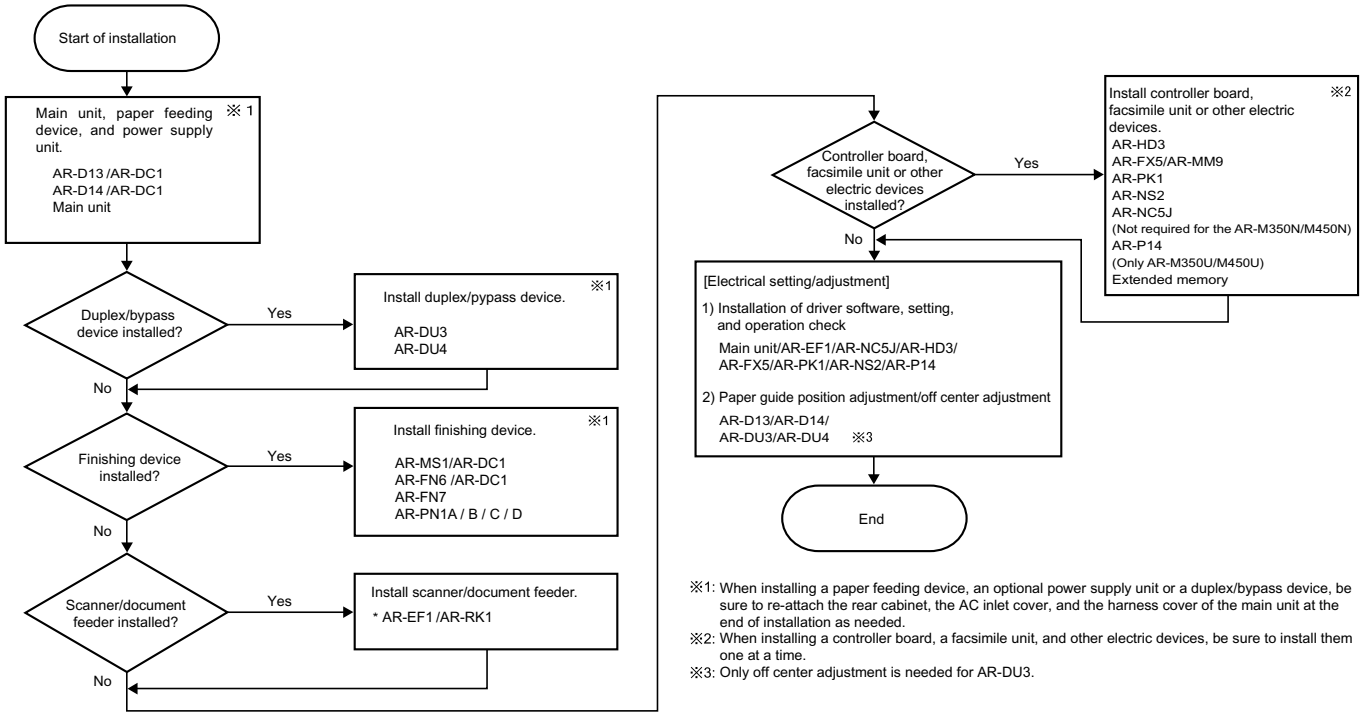
[6] UNPACKING AND INSTALLATION

1. Installing procedure flowchart

There are many combinations between this machine and option units. For installing option units, observe the following procedures for efficiency.

To install the devices efficiently, follow the procedure below.
Some peripheral devices may have been installed as standard devices depending on the main unit model.
Part of descriptions and illustrations may be different.





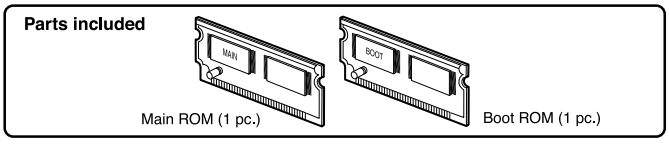
※1: When installing a paper feeding device, an optional power supply unit or a duplex/bypass device, be sure to re-attach the rear cabinet, the AC inlet cover, and the harness cover of the main unit at the end of installation as needed.
※2: When installing a controller board, a facsimile unit, and other electric devices, be sure to install them one at a time.
※3: Only off center adjustment is needed for AR-DU3.

* When installing an option, refer to the Service Manual for that option and or the AR-M350 / M450 Service Manual.

2. AR-P14 installing procedure

<Before installation>

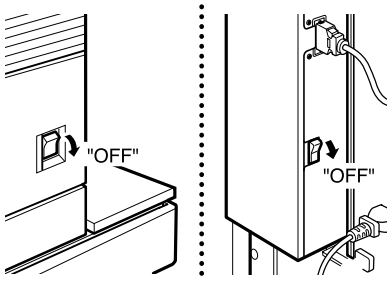
* This installation procedure is provided for use with the AR-M350U/ M450U series.
* To connect this machine to a network, a Print Server Card (NIC) AR-NC5J must be installed to the multi-function controller board in advance.



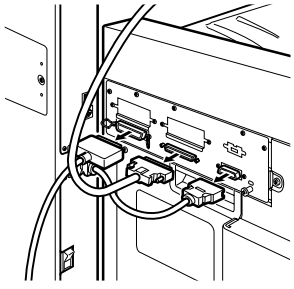
* To enable the printer expansion function, the product key must be acquired.

The application number, machine serial number, and product key number are important information.
Keep the above information for future reference.

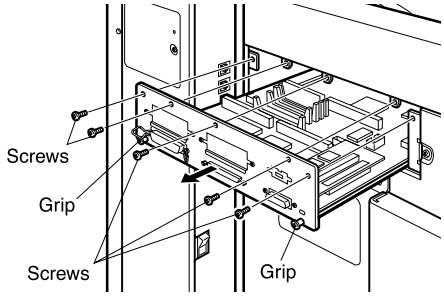
1) Mount the printer expantion kit ROMs to the control PWB.
<1>Turn off the main switch of the main unit of the printer
Turn the main switch located on the front side of the main unit to the "OFF" position.
If the machine is equipped with a facsimile unit, also turn off the FAX power switch.
Then remove the power plug from the outlet.
.



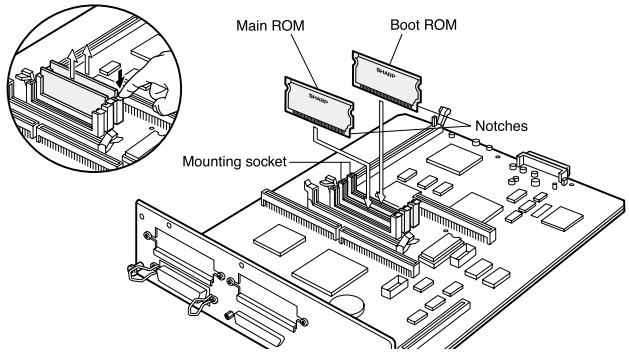
<2>Remove the cables connected to the control PWB unit.
Remove all the cables connected to the control PWB unit of the main unit of the printer.



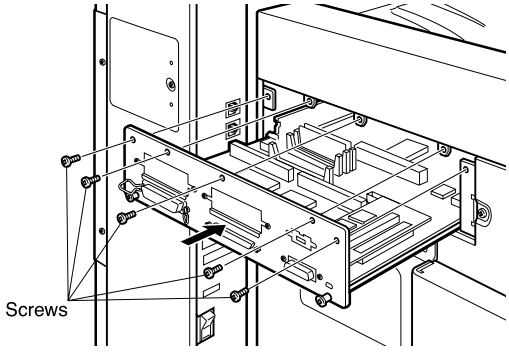
<3>Remove the control PWB unit.
Remove the five screws that fix the control PWB unit to the main unit of the printer.
Then, hold the two grips and pull out the control PWB unit to remove it from the main unit.



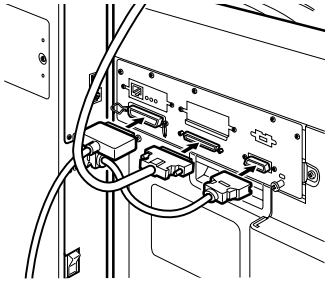
<4>Mount the printer expansion kit ROMs(2 pcs.)to the control PWB.
Remove the ROMs(main and boot ROMs)from the control PWB and replace them with the two ROMs(main and boot ROMs)of the printer expansion kit.
The main and boot ROMs are indicated with "MAIN" and "BOOT" on the labels on the ROMs respectively.
When mounting the printer expansion kit ROMs, insert them to the same positions in the same direction as those before replacement and ensure that the inserted printer expansion kit ROMs are locked with the fittings of the sockets.



<5>Re-attach the control PWB.
Attach the control PWB to the main unit of the printer and fix it using five screws.

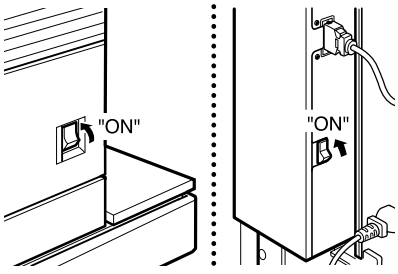


<6>Connect the cables to the control PWB.
Connect all the cables that have been removed in <2> to the original positions of the control PWB unit.



If another peripheral device must be installed, carry out the following steps at the end of the installation work.

2) Turn on the main switch of the main unit of the printer.
Insert the power plug of the main unit of the printer to the outlet.
Then, turn the main switch located on the front side of the main unit to the "ON" position.
If the machine is equipped with a facsimile unit, turn on the FAX power switch.



3) Prepare to enable the printer expansion function.
To enable the printer expansion function, use the keys on the operation panel to enter the product key.
For entry of the product key, see the key operator's guide of the operation manual for the main unit.

Carry out the network setting for the Print Server Card.
Use a key operator program to carry out the network setting for this machine. For this network setting, the customer's network environment must be checked. Consult the network administrator to carry out the setting.

In addition to the network setting for this machine, to use the machine in the network environment:
According to the customer's network environment, install the driver software from the CD-ROM supplied with this machine and use the utility software supplied with the Print Server Card to set the network printer for the server computer.
For installation in the server computer and network setting, see the operation manual supplied with the main unit.
This setting must be carried out by the network administrator or based on consultation with the network administrator.

4) To check the operation of the printer expansion function.
When the network settings and the driver settings are complete, perform a test print to check if printing can be performed successfully.
(When test printing is completed successfully, use the "list print" key operator program to print the network settings and keep the printout for future reference.)

Installation of AR-P14 is now complete.

[7] MAINTENANCE

1. Self print of set values

Use SIM 22-6 to print the set values (machine settings) and jam history.
These values must be printed before execution of maintenance or disassembly procedures.

2. Maintenance System Table

The maintenance system table is the same as that of the AR-M350/M450.

A. Scanner / DSPF

Maintenance cycle : 50K

× Check (Clean, replace, or adjust as necessary.) ○ Clean ▲ Replace △ Adjust ☆ Lubricate □ Move position

Unit name	Part name		When calling	50K	100K	150K	200K	250K	300K	350K	400K	Remark
Optical section	Mirror/Lens/Reflector/Sensors		○	○	○	○	○	○	○	○	○	
	Table glass/OC		○	○	○	○	○	○	○	○	○	
	White reference glass		○	○	○	○	○	○	○	○	○	
	Rails			☆	☆	☆	☆	☆	☆	☆	☆	
	Drive belt/Drive wire/Pulley			×	×	×	×	×	×	×	×	
DSPF	Paper feed section	Take-up roller	○	○	▲	○	▲	○	▲	○	▲	Note 2
		Separation pad	○	○	▲	○	▲	○	▲	○	▲	Note 2
		Paper feed roller	○	○	▲	○	▲	○	▲	○	▲	Note 2
	Transport section	PS roller	○	○	○	○	○	○	○	○	○	
		Exposure section (Dust-proof glass)	○	○	○	○	○	○	○	○	○	
	Paper exit section	Paper feed roller SPF	○	○	○	○	○	○	○	○	○	
	Other	Sensors			○		○		○		○	For cleaning, blow air.
	Finish stamp section [Option] (Japan only)	Stamp solenoid									▲	
		Stamp individual part	×	×	×	×	×	×	×	×	×	User replacement at 10K or 1 year.

Note 2: Replacement reference: Same as above or 2 years.

B. Engine section

* For disassembly procedures, refer to the AR-P350/P450 Service Manual.

Maintenance cycle : 50K

× Check (Clean, replace, or adjust as necessary.) ○ Clean ▲ Replace △ Adjust ☆ Lubricate □ Move position

Unit name	Part name	When calling	50K	100K	150K	200K	250K	300K	350K	400K	Remark
Drum peripheral	Drum		▲	▲	▲	▲	▲	▲	▲	▲	Installed when shipping
	Cleaner blade		▲	▲	▲	▲	▲	▲	▲	▲	
	Toner reception seal		▲	▲	▲	▲	▲	▲	▲	▲	
	Side molt		▲	▲	▲	▲	▲	▲	▲	▲	
	Transfer roller	×	×	▲	×	▲	×	▲	×	▲	
	Discharge plate	×	×	▲	×	▲	×	▲	×	▲	
	TR bearing (F/R)			×		×		×		▲	
	Transfer roller collar			×		×		×		▲	
	After-transfer star ring			×		×		×		×	
	TR gear	×	×	×	×	▲	×	×	×	▲	
	Screen grid	(○)×	▲	▲	▲	▲	▲	▲	▲	▲	
	Drum separation pawl UN		▲	▲	▲	▲	▲	▲	▲	▲	
	Charger case (M/C)		○	○	○	○	○	○	○	○	
	Charging plate (saw teeth)	(○)×	▲	▲	▲	▲	▲	▲	▲	▲	
Developing section	Developer		×	▲	×	▲	×	▲	×	▲	Supplied when installing
	DV blade		×	▲	×	▲	×	▲	×	▲	
	DSD collar		○	○	○	○	○	○	○	○	
	DV side seal F		×	▲	×	▲	×	▲	×	▲	
	DV side seal R		×	▲	×	▲	×	▲	×	▲	
	Toner cartridge										Attached when installing./ EX Japan: 814g, user replacement for every 27K.
Fusing section	Upper heat roller		○	○	○	▲	○	○	○	▲	
	Lower heat roller		○	○	○	▲	○	○	○	▲	
	Upper separation pawl		▲	▲	▲	▲	▲	▲	▲	▲	
	Lower separation pawl		▲	▲	▲	▲	▲	▲	▲	▲	
	Thermistor		○	×	○	×	○	×	○	×	Clean and remove paper dust.
	Upper heat roller gear		×	×	×	▲	×	×	×	▲	
	Paper guides	○	○	○	○	○	○	○	○	○	
	Gears		☆	☆	☆	☆	☆	☆	☆	☆	
	Cleaning roller		×	×	×	▲	×	×	×	▲	
	CL roller collar					▲				▲	
Filters	Ozone filter			▲		▲		▲		▲	
Paper feed section	Paper feed roller	○	○	×	○	×	○	×	○	×	Note 1
	Torque limiter	×		×		×		×		×	Note 1
Transport section Paper exit reverse section	PS follower roller	○	○	○	○	○	○	○	○	○	
	Transport rollers	○	○	○	○	○	○	○	○	○	
	Transport paper guides	○	○	○	○	○	○	○	○	○	
	Paper dust remover		×	▲	×	▲	×	▲	×	▲	
Drive section	Specified position	☆	☆	☆	☆	☆	☆	☆	☆	☆	
	Belts							×			
Image quality		×	×	×	×	×	×	×	×	×	
Other	Sensors			×		×		×		×	

Note 1:Replacement reference: Use the counter value of each paper feed port as the replacement reference.
Paper feed roller/Torque limiter section: 80K or 2 years

C. Peripheral devices

Maintenance cycle : 50K

× Check (Clean, replace, or adjust as necessary.) ○ Clean ▲ Replace △ Adjust ☆ Lubricate □ Move position

Option name	Part name		When calling	50K	100K	150K	200K	250K	300K	350K	400K	Remark
ADU + Manual feed	Paper feed separation section	Paper feed rollers	(○) ×	○	×	○	×	○	×	○	×	Note 3
		Separation pad	(○) ×	○	×	○	×	○	×	○	×	Note 3
		Torque limiter	(○) ×		×		×		×		×	Note 3
	Transport section	Transport rollers	○	○	○	○	○	○	○	○	○	
		Transport paper guides	○	○	○	○	○	○	○	○	○	
	Drive section	Gears	☆		☆		☆		☆		☆	(Specified position)
		Belts							×			
	Other	Sensors	×		×		×		×		×	
Desk (Multi stage LCC) Multi purpose	Paper feed separation section	Paper feed rollers	(○) ×	○	×	○	×	○	×	○	×	Note 3
		Torque limiter	(○) ×		×		×		×		×	Note 3
	Transport section	Transport roller	○	○	○	○	○	○	○	○	○	
		Transport paper guides	○	○	○	○	○	○	○	○	○	
	Drive section	Gears	☆		☆		☆		☆		☆	(Specified position)
		Belts							×			
	Other	Sensors	×		×		×		×		×	
Finisher	Transport section	Transport rollers	○		○		○		○		○	
		De-curler roller	(○) ×	×	○	×	○	×	○	×	○	
		Transport paper guides	○		○		○		○		○	
	Drive section	Gears	☆		☆		☆		☆		☆	(Specified position)
		Belts							×			
	Other	Sensors	×		×		×		×		×	
		Discharge brush	×		×		×		×		×	
	Staple un											Replace UN at 100K staple.
	Staple cartridge											User replacement for every 3000pcs.
Mail-bin stacker	Transport section	Transport roller	○		○		○		○		○	
		Transport paper guides	○		○		○		○		○	
	Drive section	Gears	☆		☆		☆		☆		☆	(Specified position)
		Belts							×			
	Other	Sensors	×		×		×		×		×	
		Discharge brush	×		×		×		×		×	
Saddle finisher	Transport section	Transport roller	○		○		○		○		○	
		Transport paper guides	○		○		○		○		○	
	Drive section	Gears	☆		☆		☆		☆		☆	(Specified position)
		Belts							×			
	Other	Sensors	×		×		×		×		×	
		Discharge brush	×		×		×		×		×	
	Staple UN											Replace UN at 100K staple (including the staple UN and the holder section).
	Staple cartridge											User replacement for every 5000 pcs.

Note 3: Replacement reference: Use the counter value of each paper feed port as the replacement reference.
Paper feed roller/Separation pad/Torque limiter section: 80K or 2 years

[8] SIMULATION

For the simulation, the following items have been changed.

22-10

Purpose	Adjustment, setup, operation data output, check (display)
Function (Content)	Used to check the system configuration (option, internal hardware).
Section	
Item	Spec
Operation/Procedure	The machine composition below is displayed.

```
SIMULATION 22-10
SYSTEM INFORMATION.
MACHINE: *******
SPF: *******  XXXXXXXXXXX
FINISHER : *******          MAIL BIN : *******          PUNCH : ******
DESK/LCC : *******          ADU: *******  XXXXXXXXXXXX
PROCESS TYPE : *
SYSTEM MEMORY: **MB                     HDD: ***MB  ICU F ******
NIC : *******  NSCN : ******             PS3 : ******
FAX: *******  FAX  MEMORY : **MB        HAND SET: *******
STAMP : *******
```

<List of display value>

MACHINE	Model codes
SPF	NONE/ (Model code)
FINISHER	NONE/ (Model code)
MAIL BIN	NONE/ (Model code)
PUNCH	NONE/ (Model code)
DESK/LCC	NONE/ (Model code)
ADU	NONE/ (Model code)
PROCESS TYPE	Process control spec (1, 2: AR machine 3: DM machine)
SYSTEM MEMORY	Memory capacity (MB)
HDD	Hard disk capacity (MB)
ICU	PRINTER/MFP
NIC	NONE/ (Model code)
NSCN	NONE/ (Network scanner)
PS3	NONE/ (PS3 expansion kit)
FAX	NONE/ (Model code)
FAX MEMORY	FAX expansion memory capacity (MB)
HAND SET	NONE/ (Model code)
STAMP	Finisher stamp NONE/ (Model code)

<List of machine model codes>

Item	Display	Content
MACHINE	AR-P350/350LP	
	AR-P450/450LP	
	AR-M350/350M	(Include the N model)
	AR-M450/450M	(Include the N model)
	AR-310M	
	AR-M350U	
	AR-M450U	
	AR-310S/310F	
	AR-350S/350F	
	AR-450S/450F	
SPF	-	Document feed unit not installed
	AR-EF2	Document feed unit (SPF) installed
	AR-EF1	Duplex document feed unit installed
FINISHER	-	After-work unit not installed
	AR-FN6	Built-in finisher installed
	AR-FN7	Console finisher installed
MAIL BIN	-	Mail bin not installed
	AR-MS1	Mail bin installed
Punch unit	-	Punch unit not installed
	AR-PN1A	Punch unit 2 holes
	AR-PN1B	Punch unit 3 holes
	AR-PN1C	Punch unit 4 holes
	AR-PN1D	Punch unit 4 holes wide hole
ADU	-	Duplex module not installed
	AR-DU3	Duplex module installed
	AR-DU4	Duplex module + manual feed unit installed
DESK	-	Paper feed desk not installed
	AR-MU1	Multi-purpose tray installed
	AR-D14/D15	Paper feed desk installed
	AR-D13	Tandem desk installed
ICU	PRINTER	Printer board
	AR-M11	MFP board
	AR-M12 *	MFP board (U model)
	AR-M13 *	MFP board (S model)
MEMORY	0MB	No expansion memory
	***MB	Expansion memory ***MB
HD	0MB	Hard disk not installed
	****MB	Hard disk installed (AR-HD3)
NIC	-	NIC not installed
	AR-NC5J	NIC installed
PS3 expansion kit	-	PS3 expansion kit not installed
	AR-PK1	PS3 expansion kit installed
FAX	-	FAX expansion kit installed
	AR-FX5	FAX expansion kit not installed
Network scanner	-	Network expansion kit not installed
	AR-NS2F	Network expansion kit installed
Expansion memory	-	Expansion memory for FAX not installed
	AR-MM9	Expansion memory for FAX 8MB (AR-MM9) installed
Handset	-	handset not installed
	AR-HN5	Handset installed
Finish stamp	-	Finish stamp unit not installed
	AR-SU1	Finish stamp unit installed

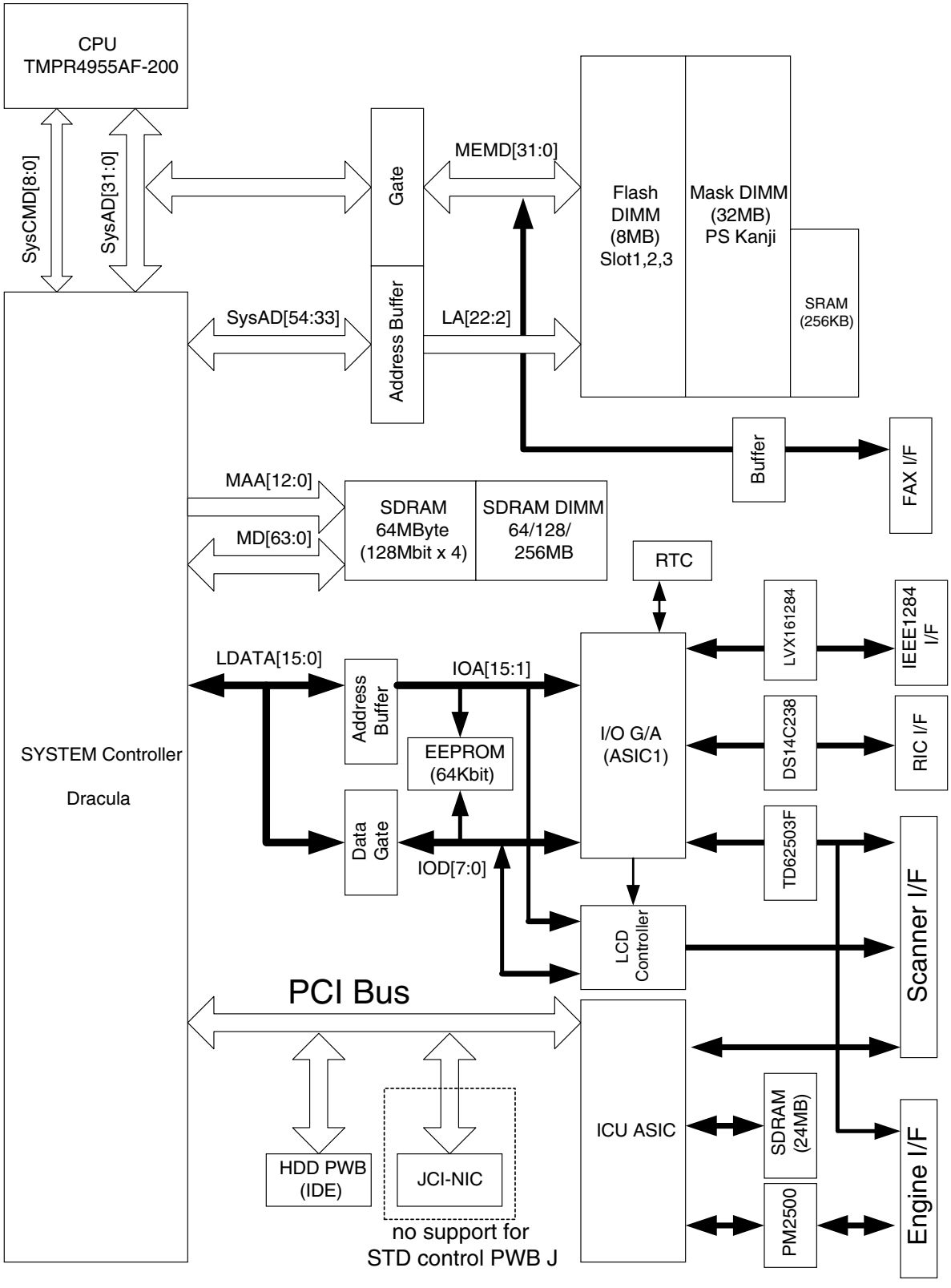
*: Not registered as a product.

[9] CIRCUIT DIAGRAM

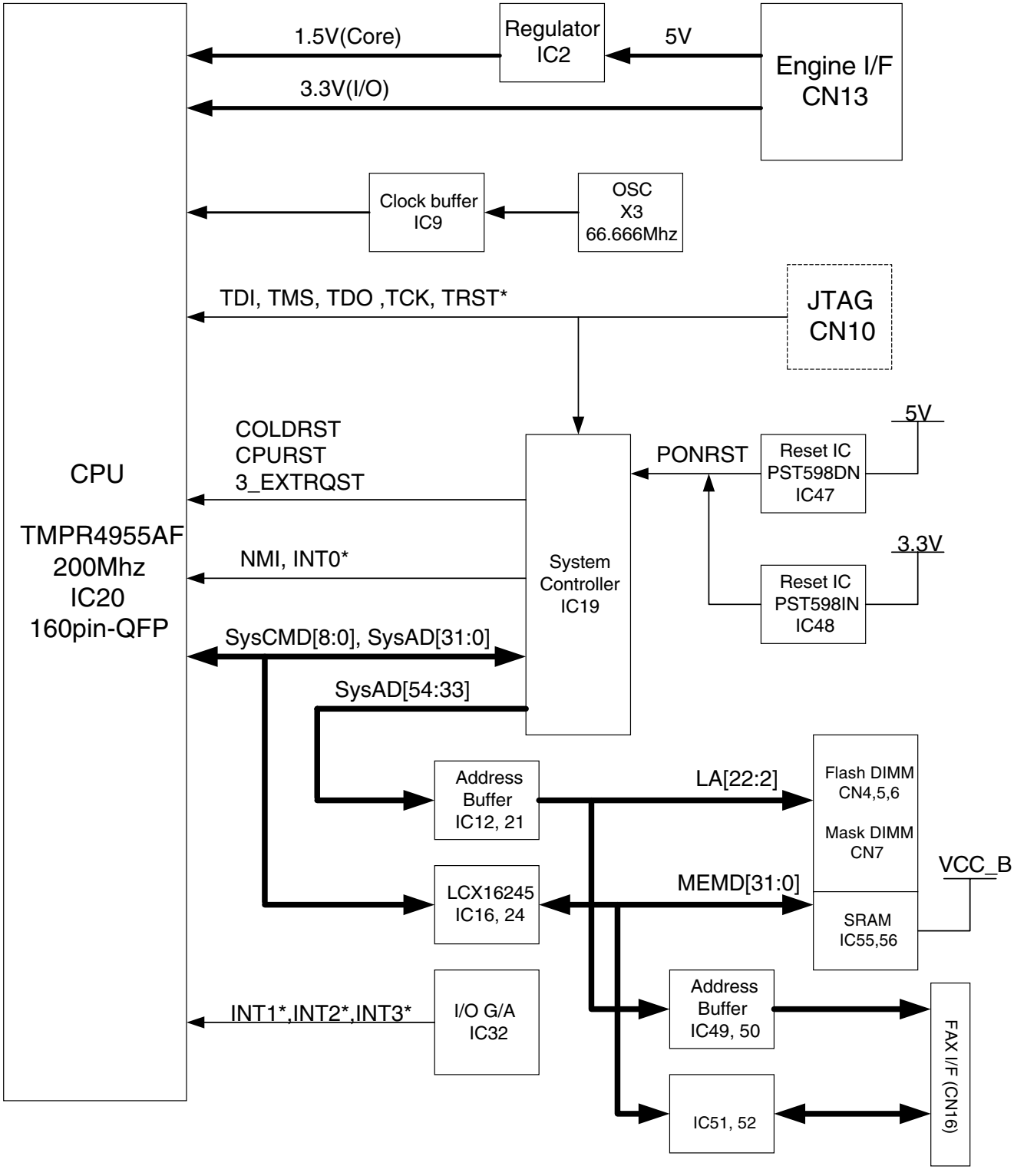
1. MFP Control PWB(for AR-M350U/M450U)

A.Block Diagrams

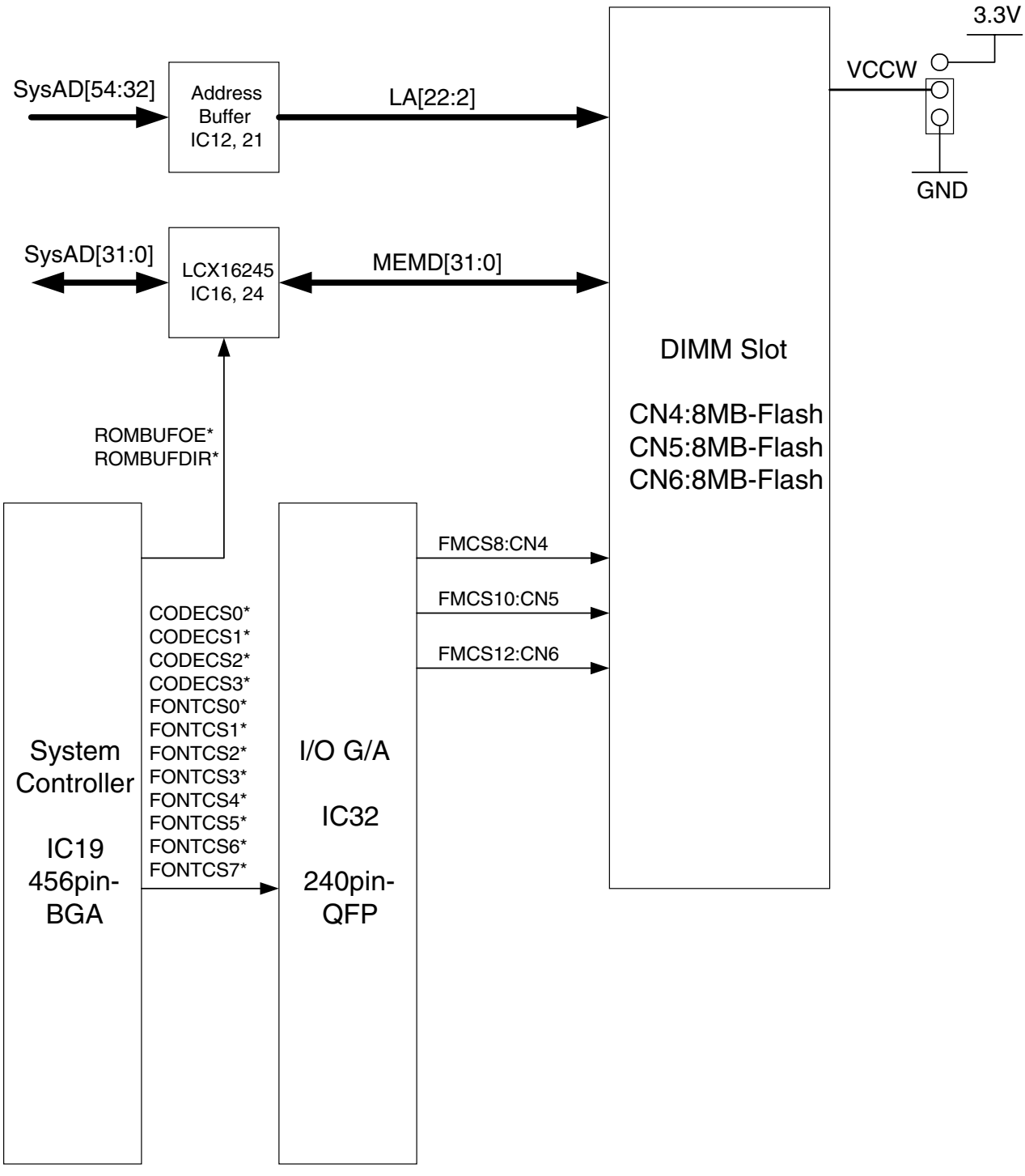
General



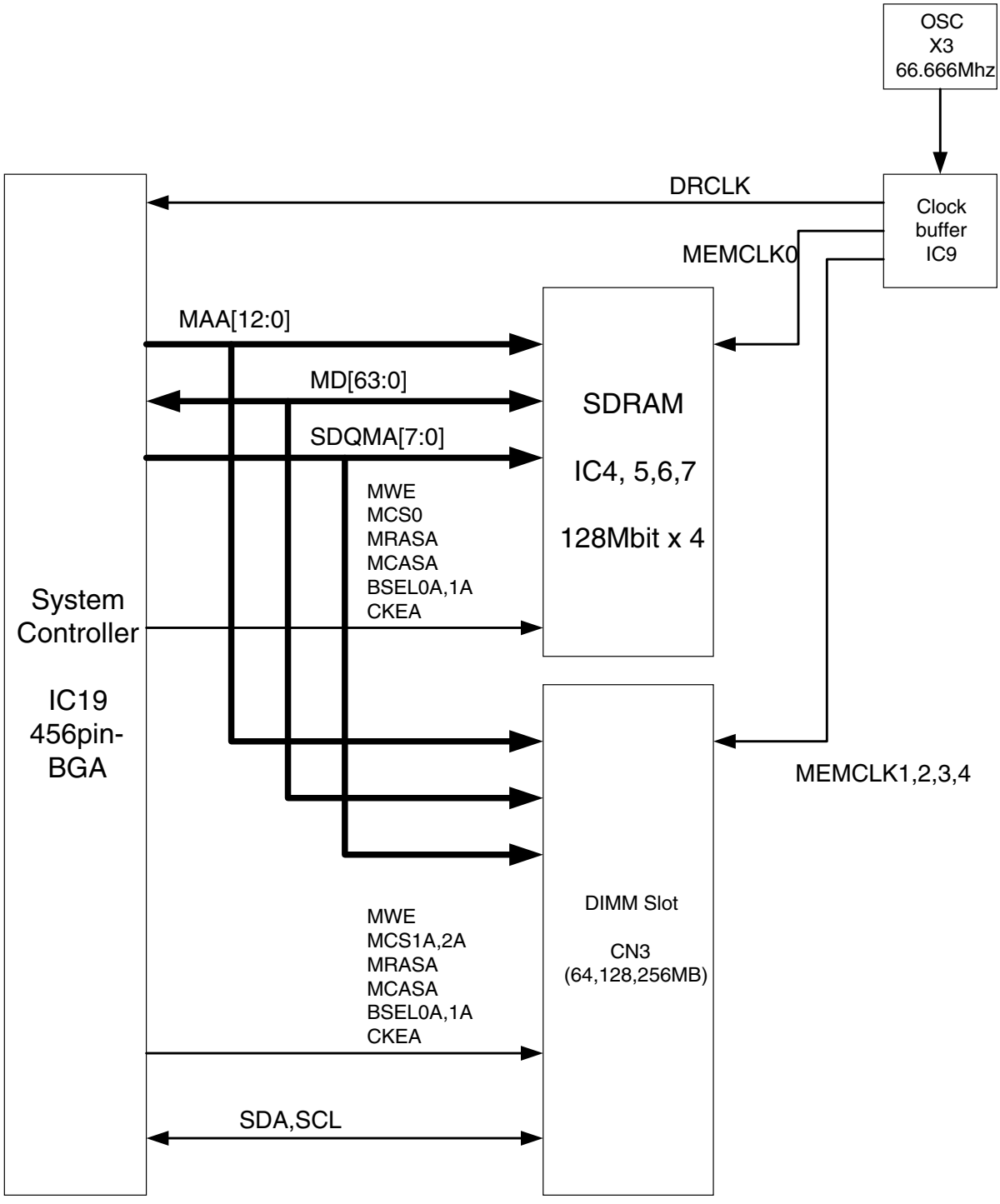
CPU Block


CPU
TMPR4955AF
200Mhz
IC20
160pin-QFP
1.5V(Core)
3.3V(I/O)
Regulator
IC2
5V
Engine I/F
CN13
Clock buffer
IC9
OSC
X3
66.666Mhz
TDI, TMS, TDO ,TCK, TRST*
JTAG
CN10
COLDRST
CPURST
3_EXTRQST
NMI, INT0*
SysCMD[8:0], SysAD[31:0]
SysAD[54:33]
System
Controller
IC19
PONRST
Reset IC
PST598DN
IC47
5V
Reset IC
PST598IN
IC48
3.3V
Address
Buffer
IC12, 21
LA[22:2]
Flash DIMM
CN4,5,6
Mask DIMM
CN7
LCX16245
IC16, 24
MEMD[31:0]
SRAM
IC55,56
VCC_B
INT1*,INT2*,INT3*
I/O G/A
IC32
Address
Buffer
IC49, 50
IC51, 52
FAX I/F (CN16)

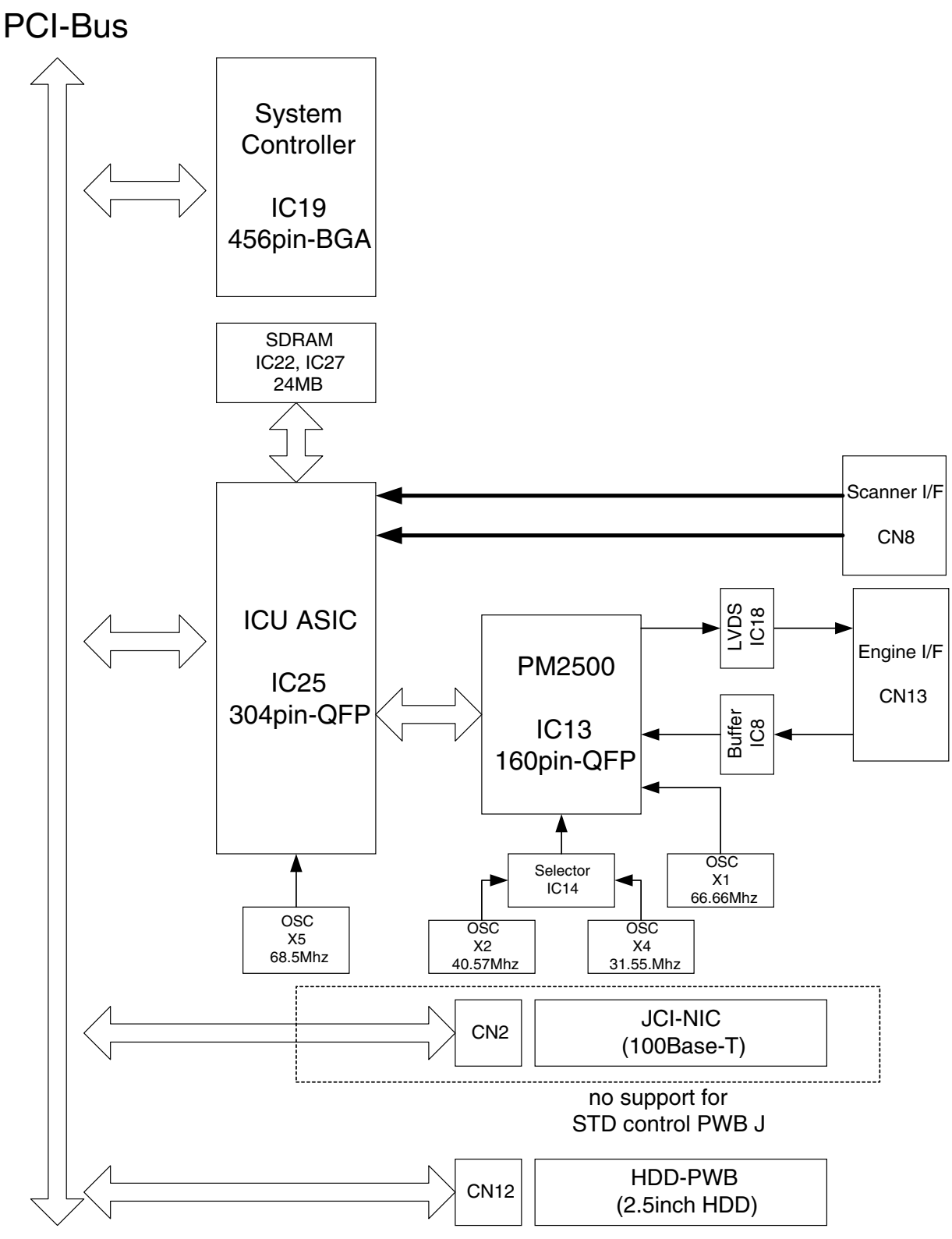
ROM Block (Flash & Mask)



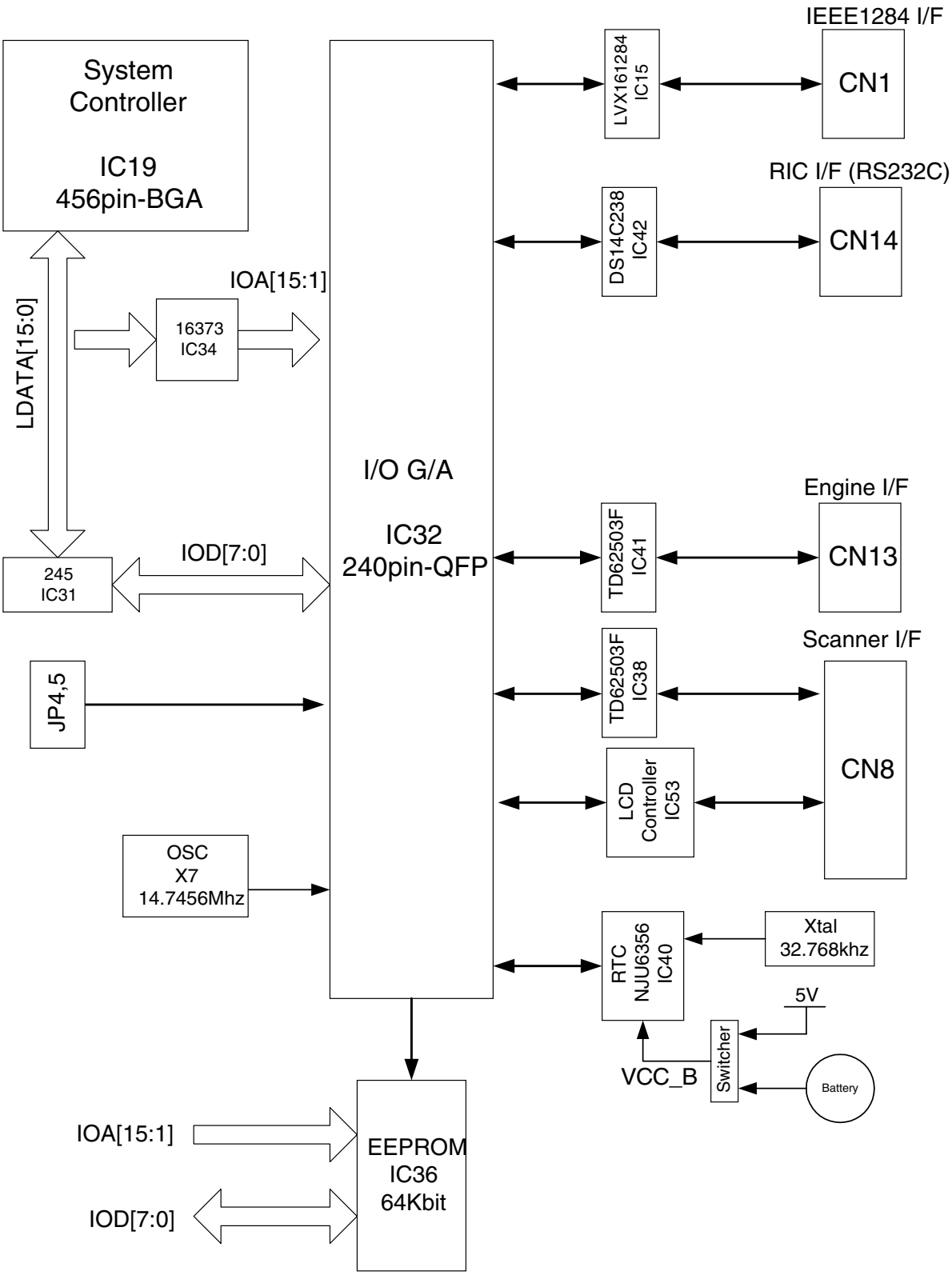
SDRAM Block (Standard & Option)



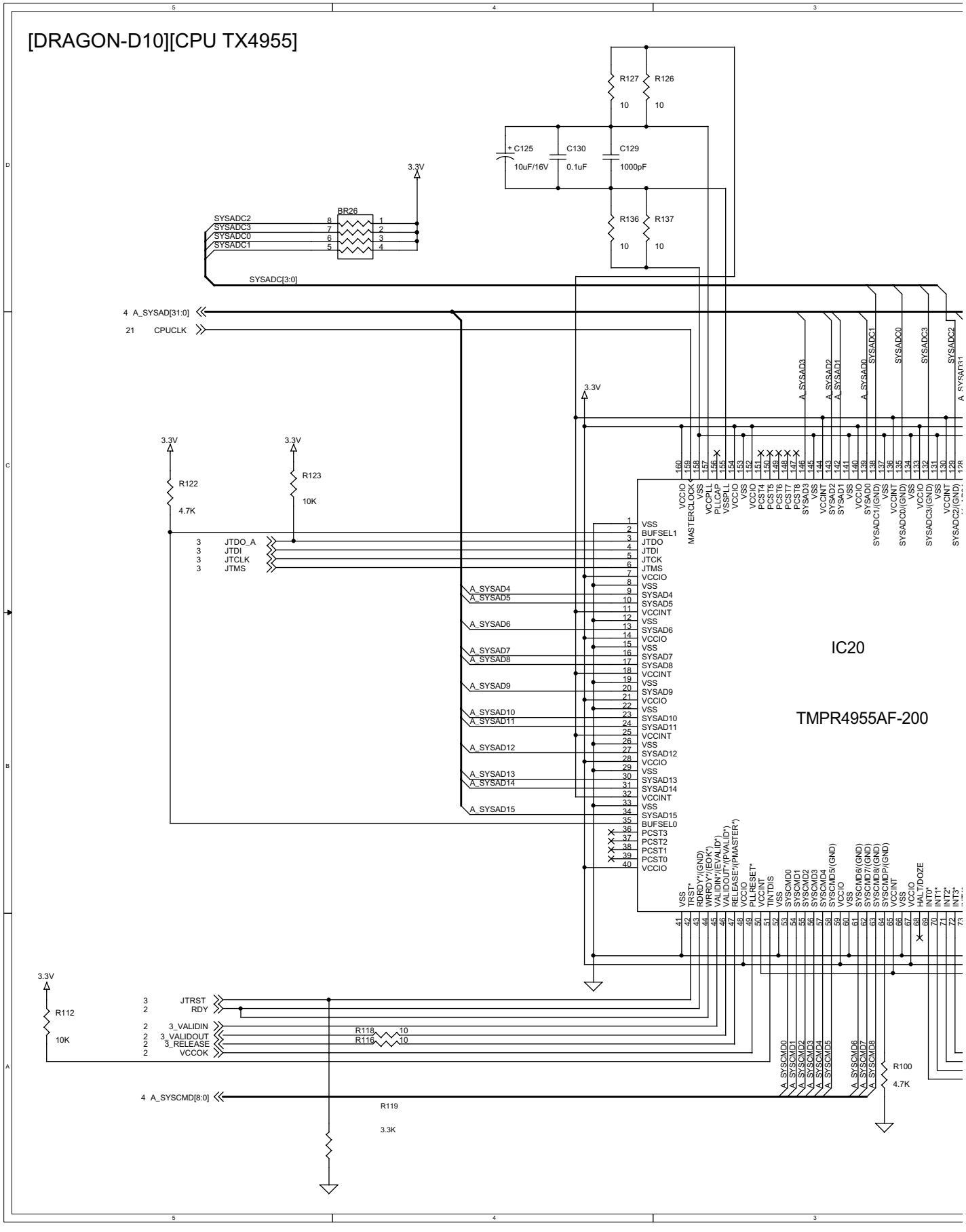
PCI Block (ICU & Option)

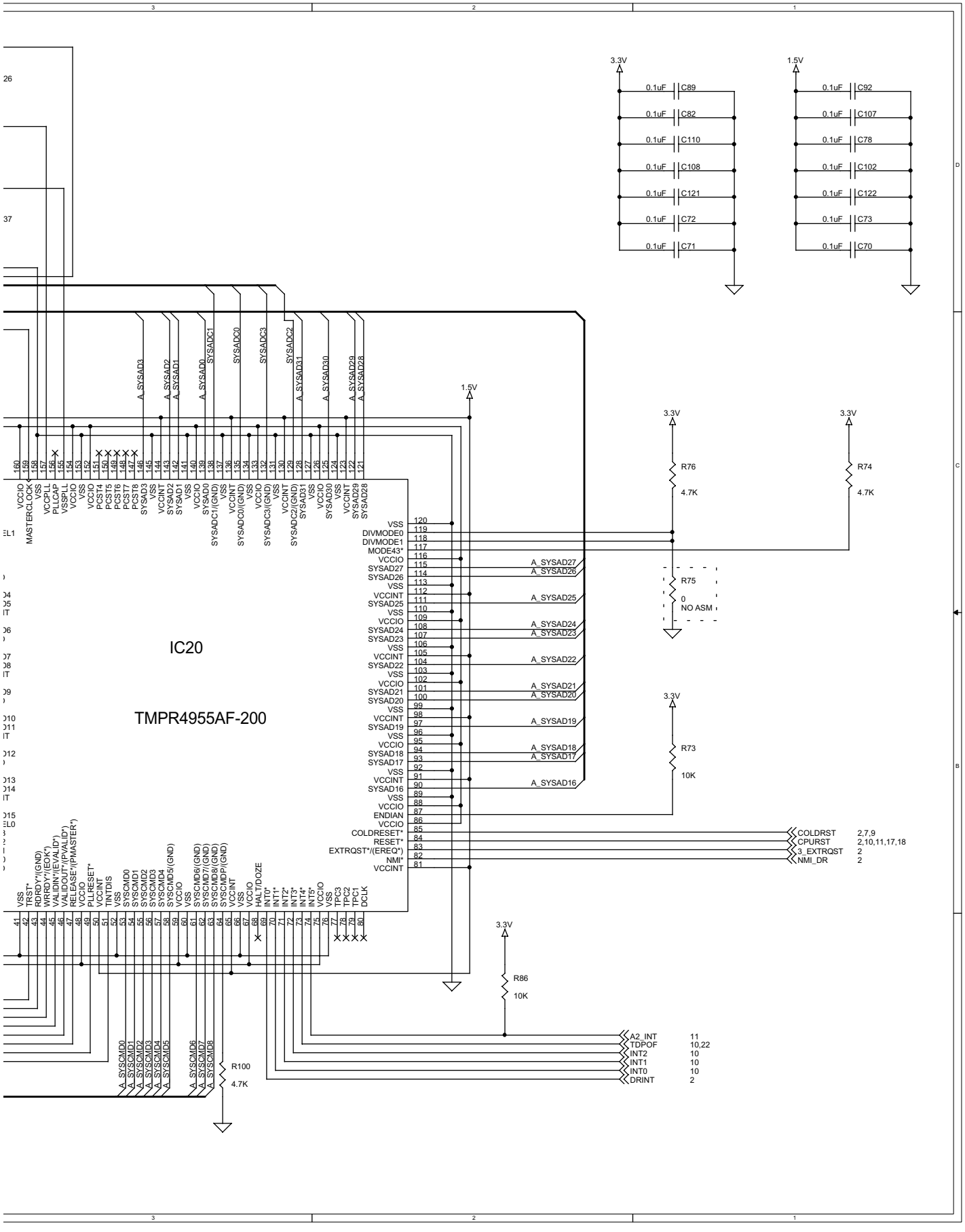


I/O Block (EEPROM & Misc I/O)

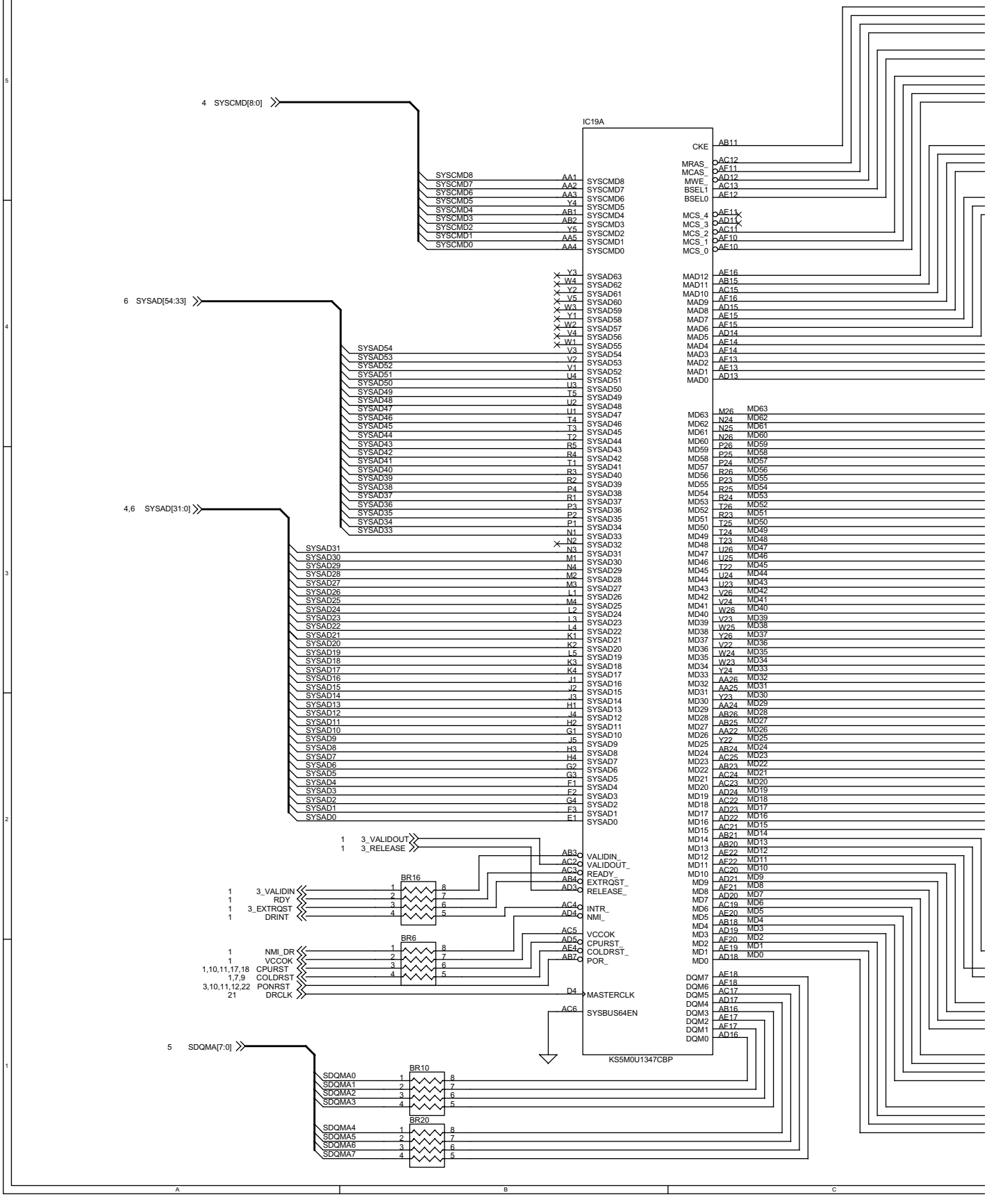


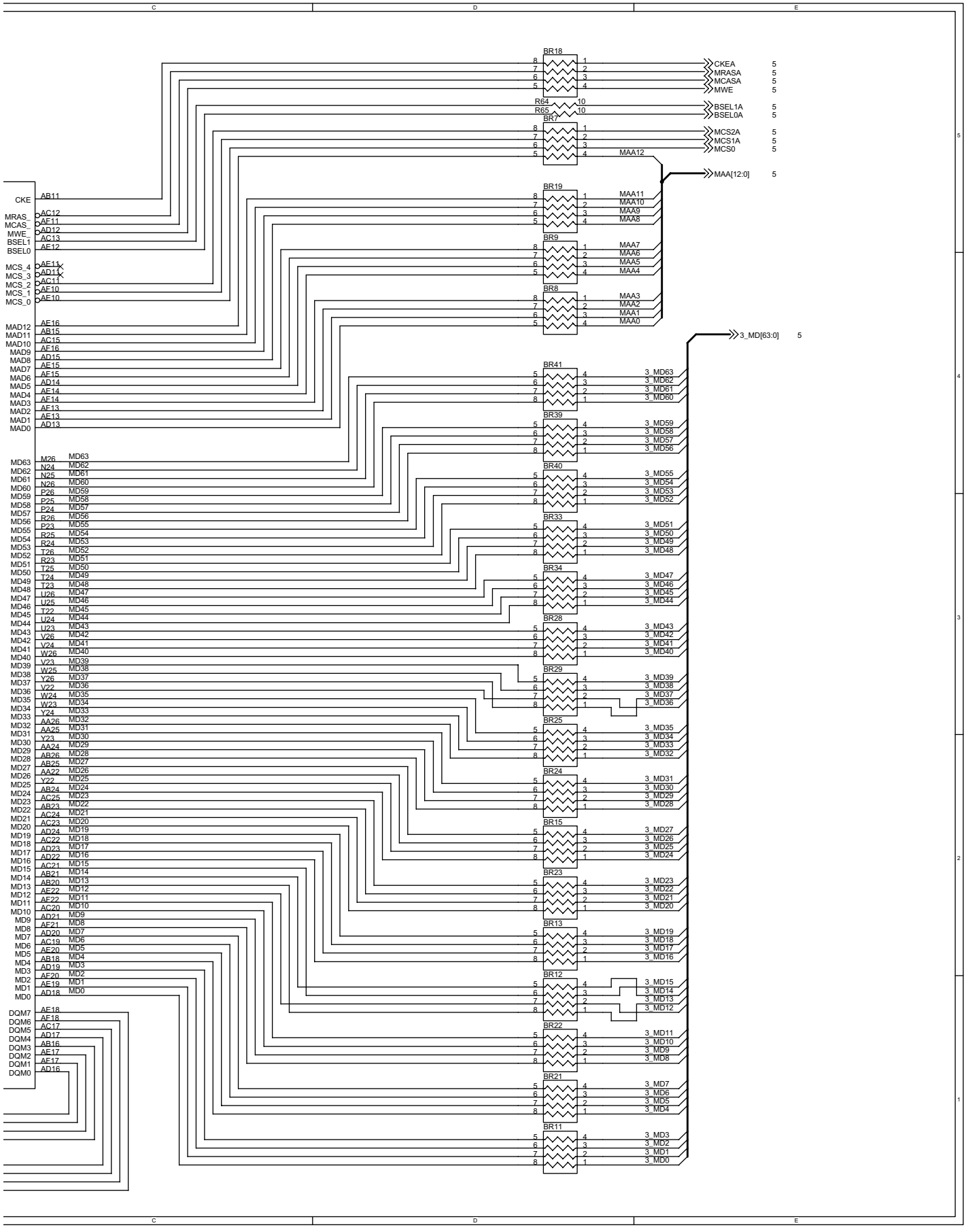
B. Circuit Diagram



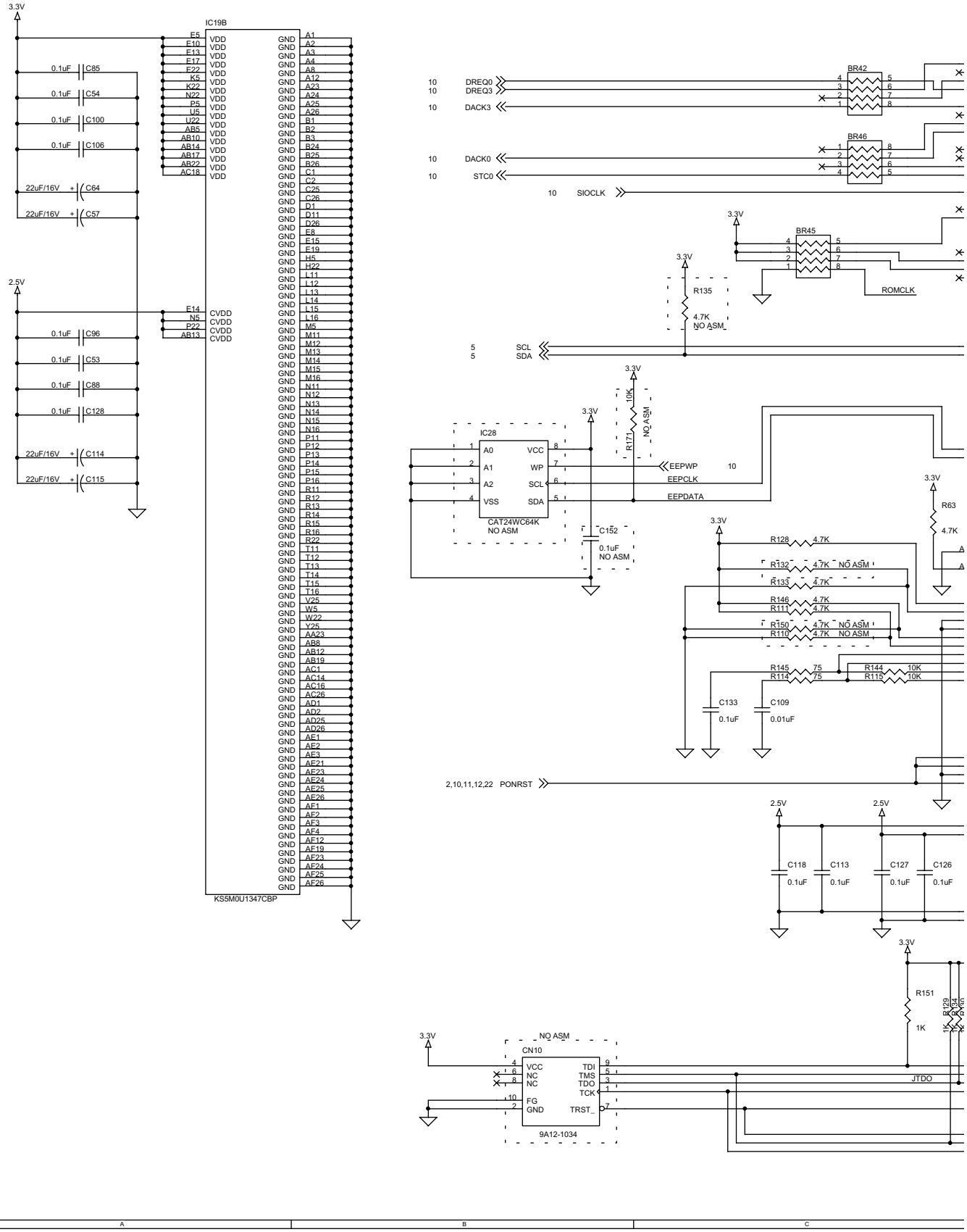

IC20
TMPR4955AF-200
3.3V
1.5V
0.1uF C89
0.1uF C82
0.1uF C110
0.1uF C108
0.1uF C121
0.1uF C72
0.1uF C71
0.1uF C92
0.1uF C107
0.1uF C78
0.1uF C102
0.1uF C122
0.1uF C73
0.1uF C70
R76 4.7K
R74 4.7K
R75 0 NO ASM
R73 10K
R86 10K
R100 4.7K
A_SYSAD27
A_SYSAD26
A_SYSAD25
A_SYSAD24
A_SYSAD23
A_SYSAD22
A_SYSAD21
A_SYSAD20
A_SYSAD19
A_SYSAD18
A_SYSAD17
A_SYSAD16
COLDRST 2,7,9
CPURST 2,10,11,17,18
3_EXTRQST 2
NMI_DR 2
A2_INT 11
TDPOF 10,22
INT2 10
INT1 10
INT0 10
DRINT 2

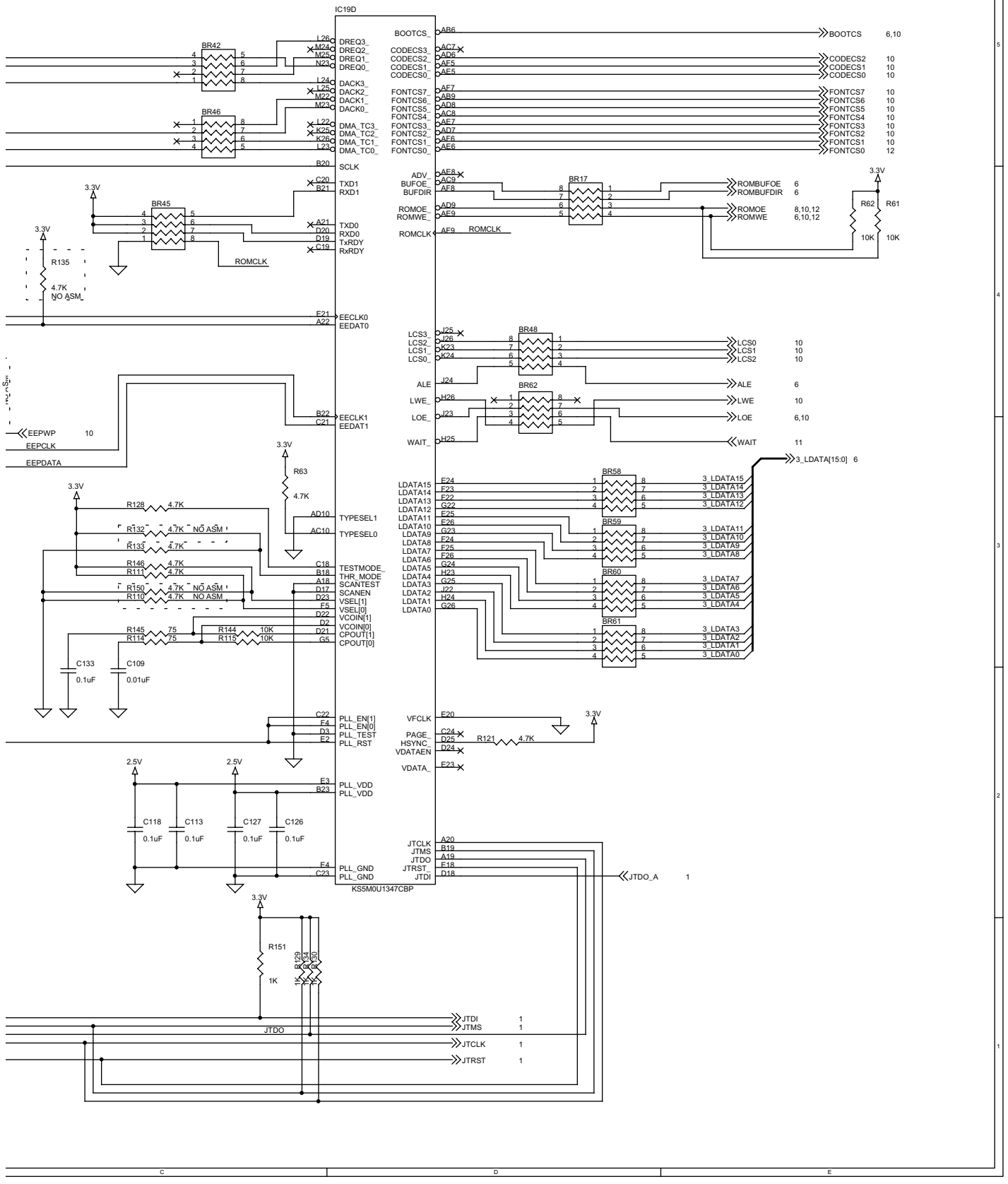
[Print Controller (for AR-M350U / M450U) (1/3)]



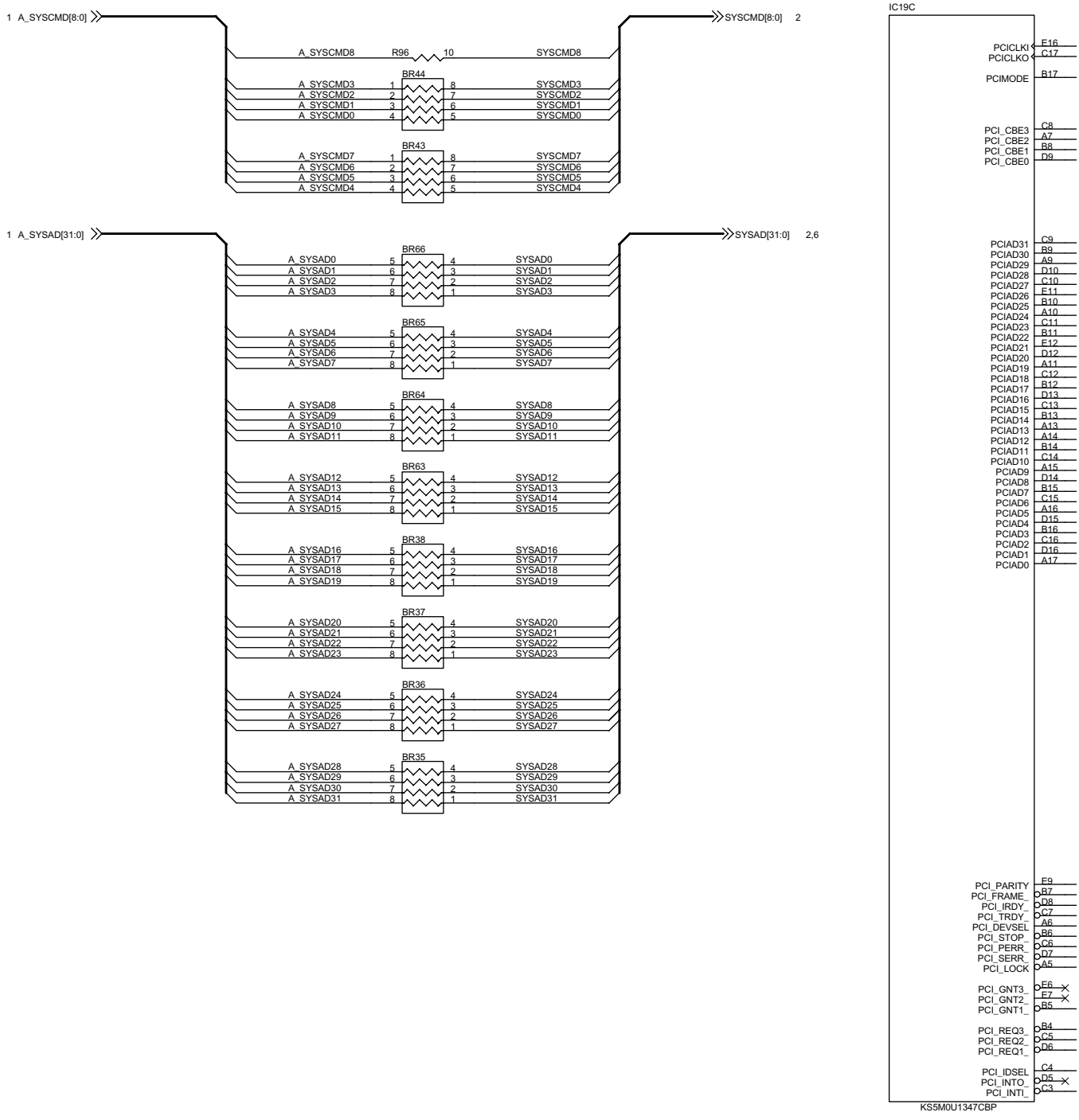

BR18
CKEA 5
MRASA 5
MCASA 5
MWE 5
R64 10
R65 10
BSEL1A 5
BSEL0A 5
BR7
MCS2A 5
MCS1A 5
MCS0 5
MAA12
MAA[12:0] 5
BR19
MAA11
MAA10
MAA9
MAA8
BR9
MAA7
MAA6
MAA5
MAA4
BR8
MAA3
MAA2
MAA1
MAA0
3_MD[63:0] 5
BR41
3_MD63
3_MD62
3_MD61
3_MD60
BR39
3_MD59
3_MD58
3_MD57
3_MD56
BR40
3_MD55
3_MD54
3_MD53
3_MD52
BR33
3_MD51
3_MD50
3_MD49
3_MD48
BR34
3_MD47
3_MD46
3_MD45
3_MD44
BR28
3_MD43
3_MD42
3_MD41
3_MD40
BR29
3_MD39
3_MD38
3_MD37
3_MD36
BR25
3_MD35
3_MD34
3_MD33
3_MD32
BR24
3_MD31
3_MD30
3_MD29
3_MD28
BR15
3_MD27
3_MD26
3_MD25
3_MD24
BR23
3_MD23
3_MD22
3_MD21
3_MD20
BR13
3_MD19
3_MD18
3_MD17
3_MD16
BR12
3_MD15
3_MD14
3_MD13
3_MD12
BR22
3_MD11
3_MD10
3_MD9
3_MD8
BR21
3_MD7
3_MD6
3_MD5
3_MD4
BR11
3_MD3
3_MD2
3_MD1
3_MD0
CKE
MRAS_
MCAS_
MWE_
BSEL1
BSEL0
MCS_4
MCS_3
MCS_2
MCS_1
MCS_0
MAD12
MAD11
MAD10
MAD9
MAD8
MAD7
MAD6
MAD5
MAD4
MAD3
MAD2
MAD1
MAD0
MD63
MD62
MD61
MD60
MD59
MD58
MD57
MD56
MD55
MD54
MD53
MD52
MD51
MD50
MD49
MD48
MD47
MD46
MD45
MD44
MD43
MD42
MD41
MD40
MD39
MD38
MD37
MD36
MD35
MD34
MD33
MD32
MD31
MD30
MD29
MD28
MD27
MD26
MD25
MD24
MD23
MD22
MD21
MD20
MD19
MD18
MD17
MD16
MD15
MD14
MD13
MD12
MD11
MD10
MD9
MD8
MD7
MD6
MD5
MD4
MD3
MD2
MD1
MD0
DQM7
DQM6
DQM5
DQM4
DQM3
DQM2
DQM1
DQM0

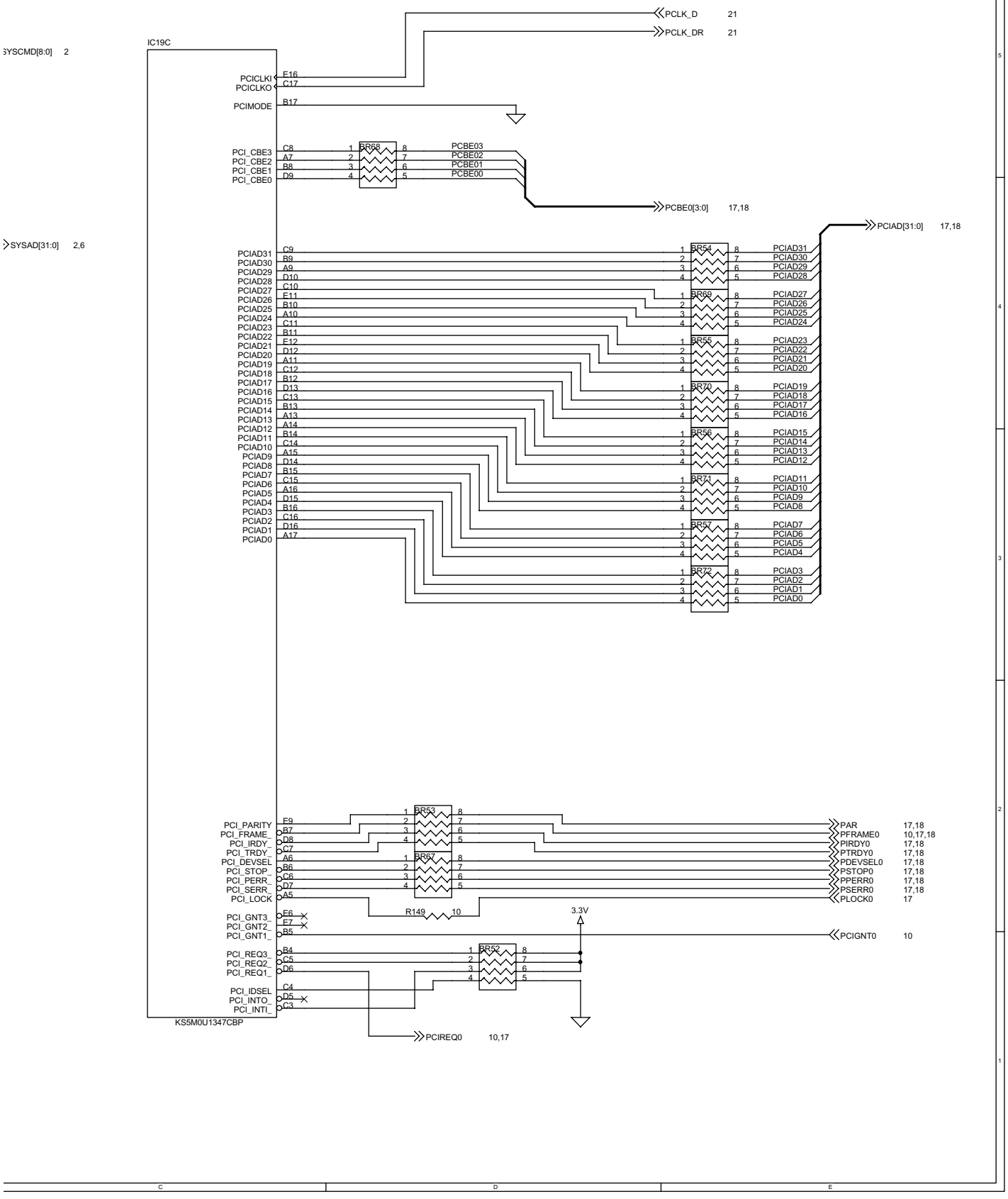
[Print Controller (for AR-M350U / M450U) (2/3)]



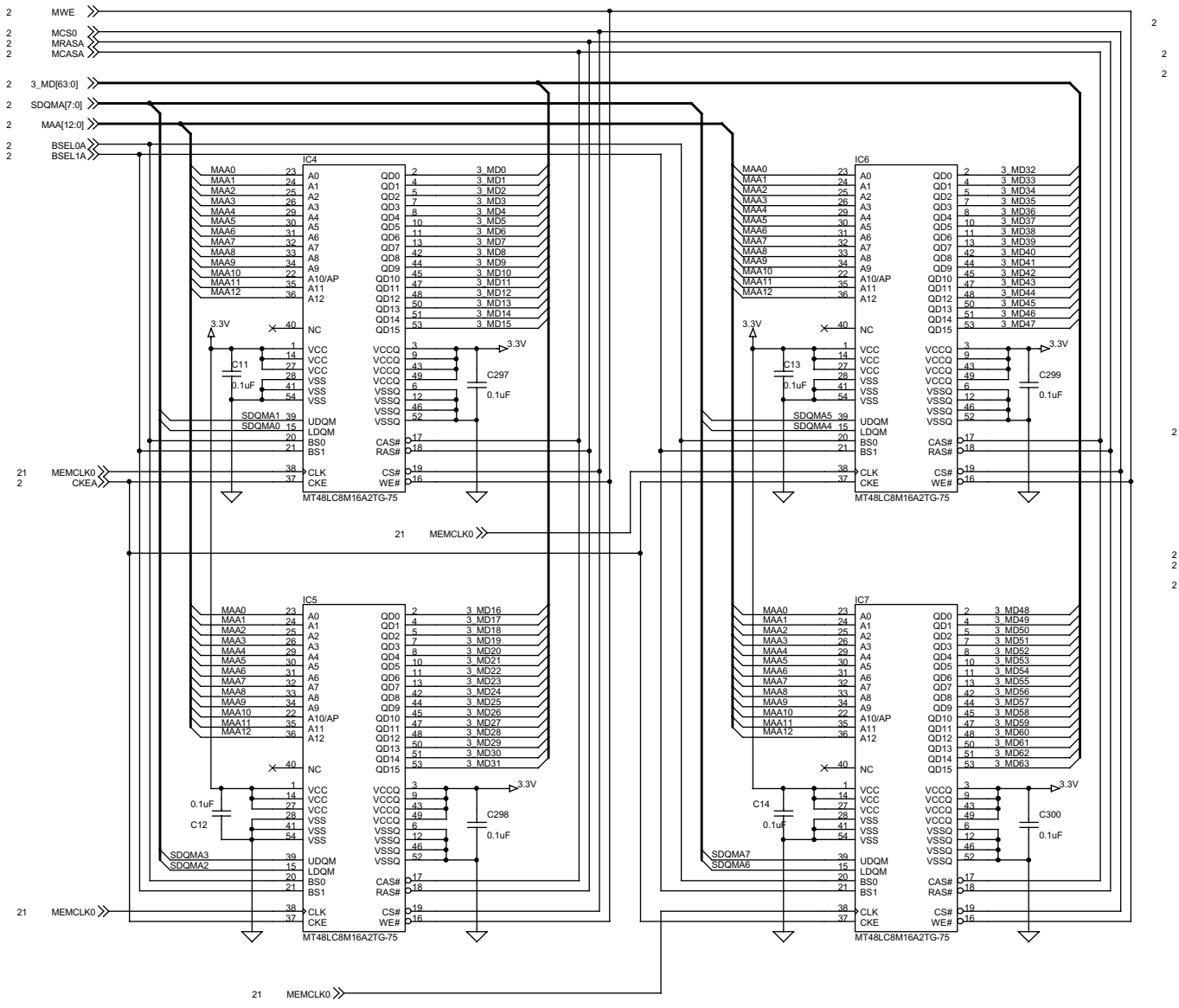

IC19D
KS5M0U1347CBP
BOOTCS_
CODECS3_
CODECS2_
CODECS1_
CODECS0_
FONTCS7_
FONTCS6_
FONTCS5_
FONTCS4_
FONTCS3_
FONTCS2_
FONTCS1_
FONTCS0_
DREQ3_
DREQ2_
DREQ1_
DREQ0_
DACK3_
DACK2_
DACK1_
DACK0_
DMA_TC3_
DMA_TC2_
DMA_TC1_
DMA_TC0_
SCLK
TXD1
RXD1
TXD0
RXD0
TxRDY
RxRDY
EECLK0
EEDAT0
EECLK1
EEDAT1
TYPESEL1
TYPESEL0
TESTMODE_
THR_MODE
SCANTEST
SCANEN
VSEL[1]
VSEL[0]
VCOIN[1]
VCOIN[0]
CPOUT[1]
CPOUT[0]
PLL_EN[1]
PLL_EN[0]
PLL_TEST
PLL_RST
PLL_VDD
PLL_VDD
PLL_GND
PLL_GND
ADV_
BUFOE_
BUFDIR
ROMOE_
ROMWE_
ROMCLK
LCS3_
LCS2_
LCS1_
LCS0_
ALE
LWE_
LOE_
WAIT_
LDATA15
LDATA14
LDATA13
LDATA12
LDATA11
LDATA10
LDATA9
LDATA8
LDATA7
LDATA6
LDATA5
LDATA4
LDATA3
LDATA2
LDATA1
LDATA0
VFCLK
PAGE_
HSYNC_
VDATAEN
VDATA_
JTCLK
JTMS
JTDO
JTRST_
JTDI
BR42
BR46
BR45
BR17
BR48
BR62
BR58
BR59
BR60
BR61
R135
4.7K
NO ASM
R63
R128
R132
R133
R146
R111
R150
R110
R145
R114
R144
R115
R121
R151
1K
C133
0.1uF
C109
0.01uF
C118
C113
C127
C126
R62
R61
10K
3.3V
2.5V
ROMCLK
BOOTCS
CODECS2
CODECS1
CODECS0
FONTCS7
FONTCS6
FONTCS5
FONTCS4
FONTCS3
FONTCS2
FONTCS1
FONTCS0
ROMBUFOE
ROMBUFDIR
ROMOE
ROMWE
LCS0
LCS1
LCS2
ALE
LWE
LOE
WAIT
3_LDATA[15:0]
EEPWP
EEPCLK
EEPDATA
JTDO_A
JTDI
JTMS
JTCLK
JTRST

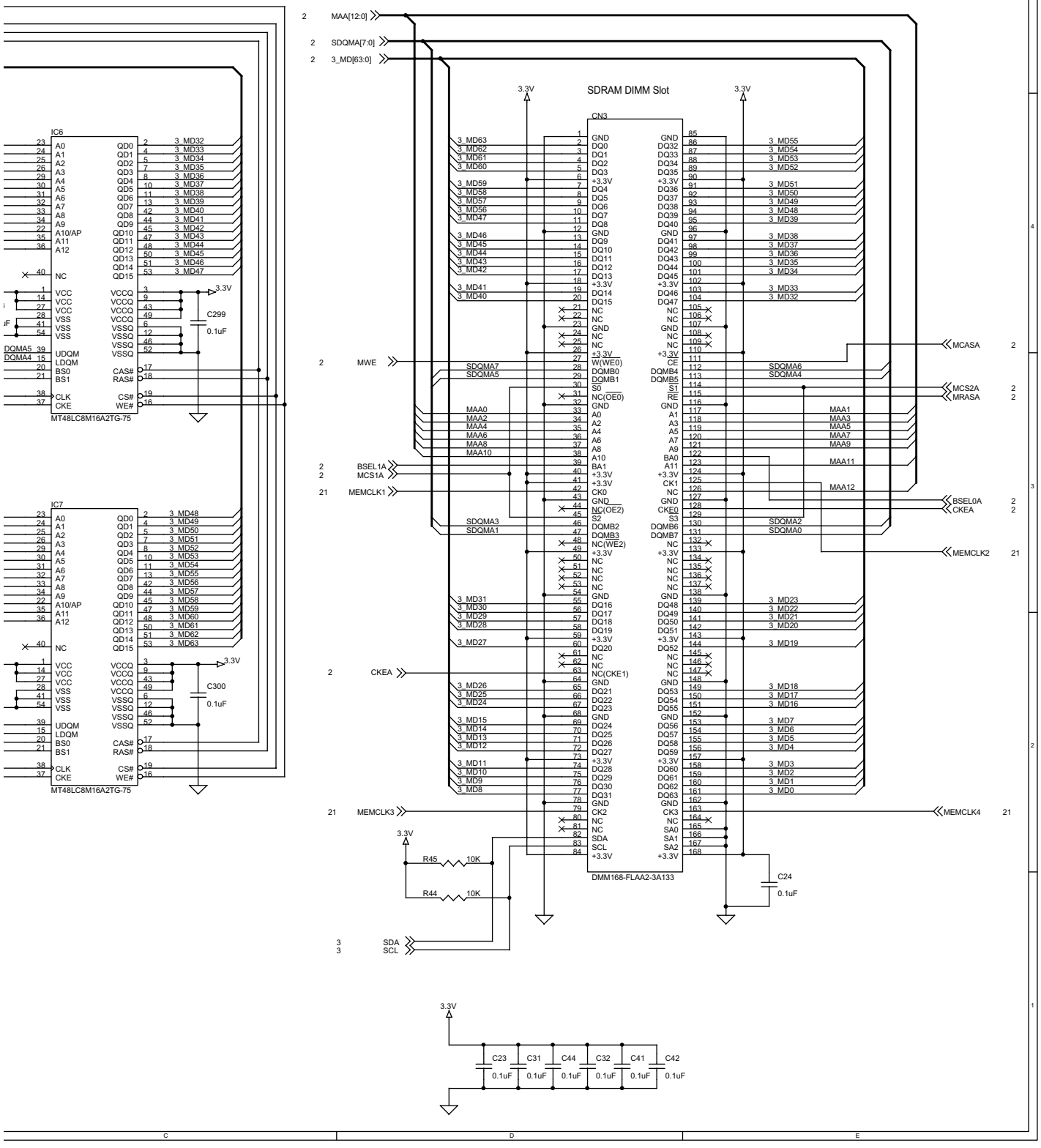
[Print Controller (for AR-M350U / M450U) (3/3)]



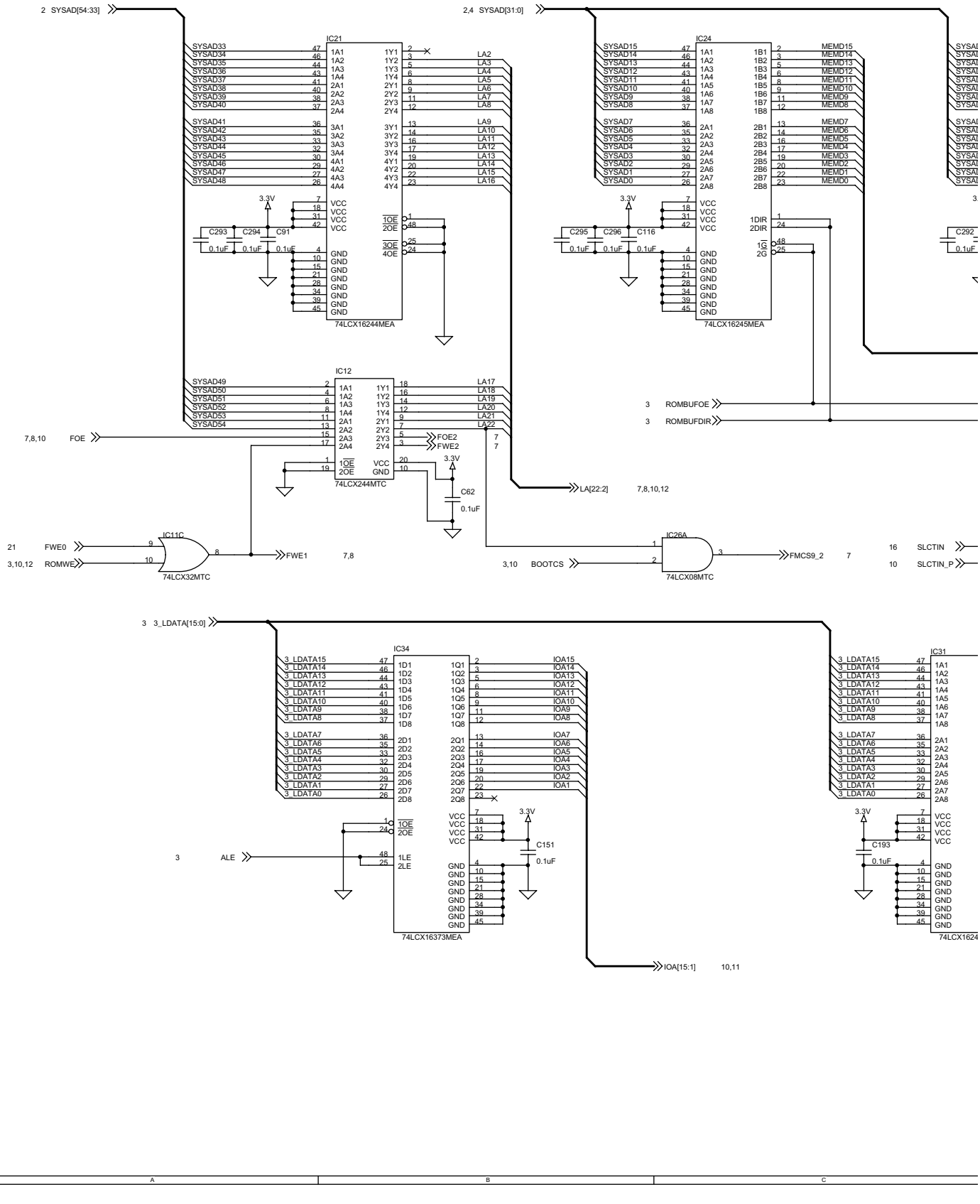

PCLK_D 21
PCLK_DR 21
IC19C
SYSCMD[8:0] 2
PCICLKI E16
PCICLKO C17
PCIMODE B17
PCI_CBE3 C8
PCI_CBE2 A7
PCI_CBE1 B8
PCI_CBE0 D9
BR68
PCBE03
PCBE02
PCBE01
PCBE00
PCBE0[3:0] 17,18
PCIAD[31:0] 17,18
SYSAD[31:0] 2,6
PCIAD31 C9
PCIAD30 B9
PCIAD29 A9
PCIAD28 D10
PCIAD27 C10
PCIAD26 E11
PCIAD25 B10
PCIAD24 A10
PCIAD23 C11
PCIAD22 B11
PCIAD21 E12
PCIAD20 D12
PCIAD19 A11
PCIAD18 C12
PCIAD17 B12
PCIAD16 D13
PCIAD15 C13
PCIAD14 B13
PCIAD13 A13
PCIAD12 A14
PCIAD11 B14
PCIAD10 C14
PCIAD9 A15
PCIAD8 D14
PCIAD7 B15
PCIAD6 C15
PCIAD5 A16
PCIAD4 D15
PCIAD3 B16
PCIAD2 C16
PCIAD1 D16
PCIAD0 A17
BR54
BR69
BR55
BR70
BR56
BR71
BR57
BR72
PCI_PARITY E9
PCI_FRAME_ B7
PCI_IRDY_ D8
PCI_TRDY_ C7
PCI_DEVSEL_ A6
PCI_STOP_ B6
PCI_PERR_ C6
PCI_SERR_ D7
PCI_LOCK A5
BR53
BR67
PAR 17,18
PFRAME0 10,17,18
PIRDY0 17,18
PTRDY0 17,18
PDEVSEL0 17,18
PSTOP0 17,18
PPERR0 17,18
PSERR0 17,18
PLOCK0 17
R149 10
3.3V
PCI_GNT3_ E6
PCI_GNT2_ E7
PCI_GNT1_ B5
PCIGNT0 10
PCI_REQ3_ B4
PCI_REQ2_ C5
PCI_REQ1_ D6
BR52
PCI_IDSEL C4
PCI_INTO_ D5
PCI_INTI_ C3
KS5M0U1347CBP
PCIREQ0 10,17

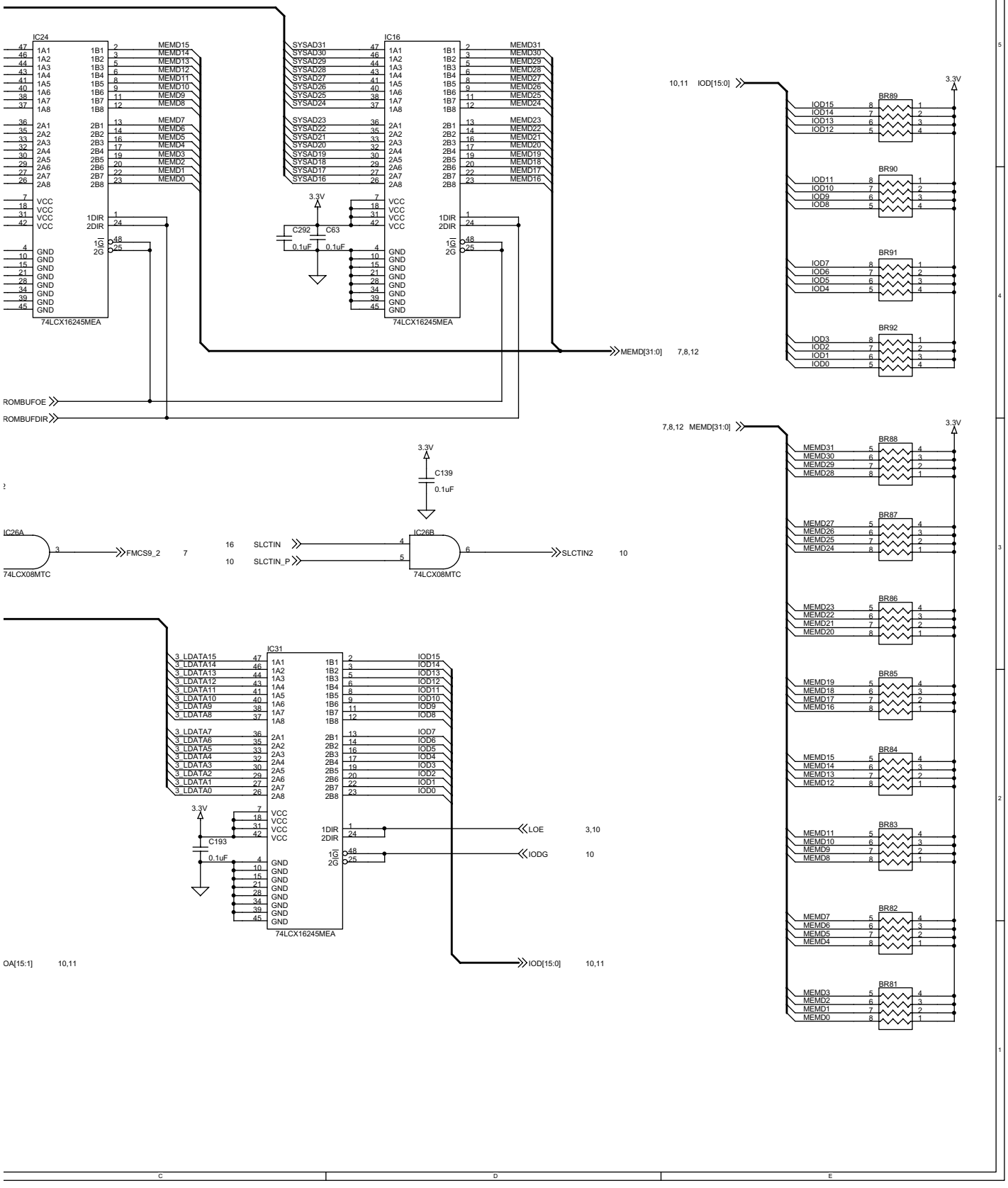
[SDRAM]


MWE
MCS0
MRASA
MCASA
3_MD[63:0]
SDQMA[7:0]
MAA[12:0]
BSEL0A
BSEL1A
MEMCLK0
CKEA
IC4
IC5
IC6
IC7
MT48LC8M16A2TG-75
3.3V
C11
C12
C13
C14
C297
C298
C299
C300
0.1uF
SDQMA1
SDQMA0
SDQMA3
SDQMA2
SDQMA5
SDQMA4
SDQMA7
SDQMA6

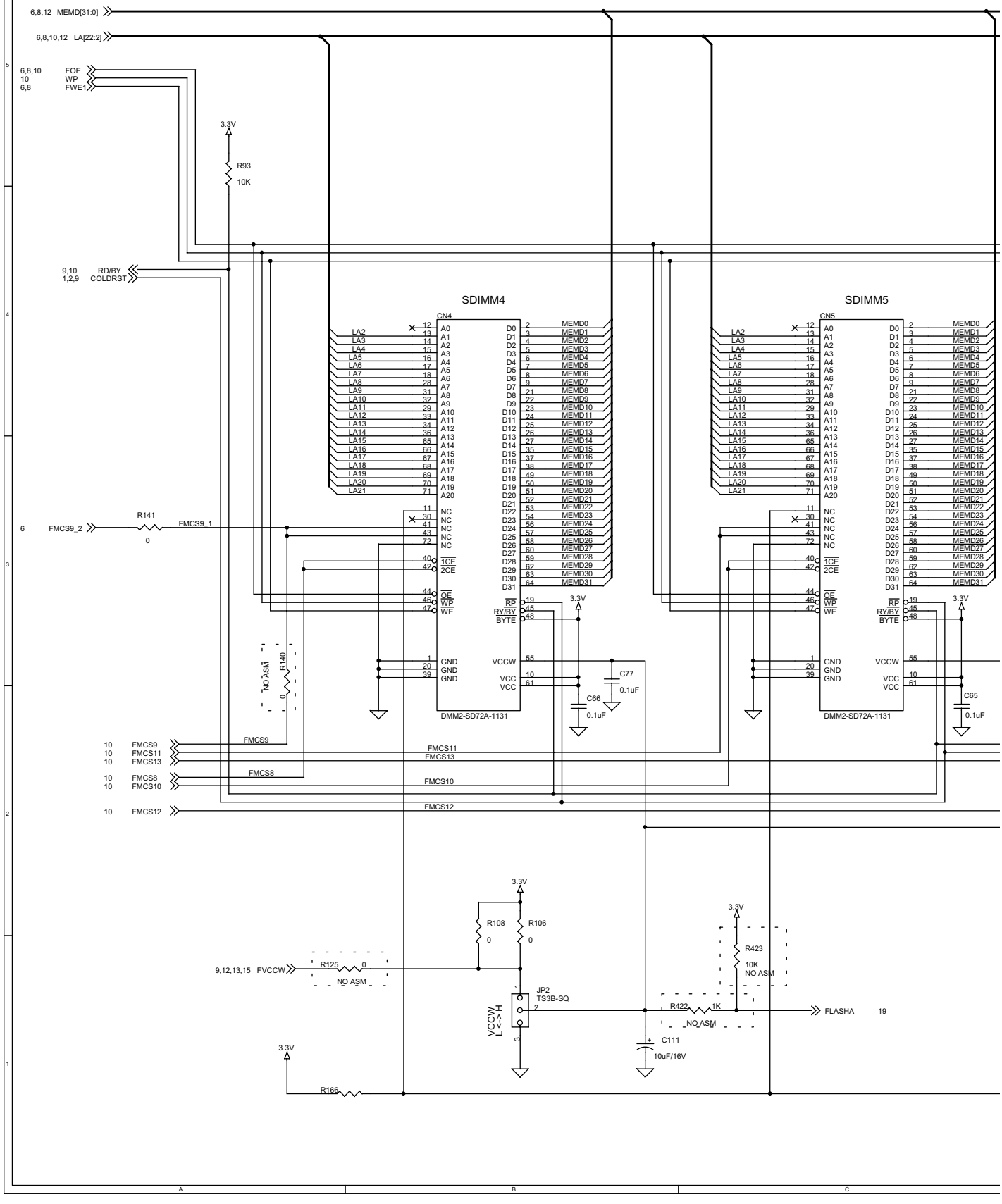

SDRAM DIMM Slot
MAA[12:0]
SDQMA[7:0]
3_MD[63:0]
MWE
BSEL1A
MCS1A
MEMCLK1
CKEA
MEMCLK3
MEMCLK4
MCASA
MCS2A
MRASA
BSEL0A
CKEA
MEMCLK2
SDA
SCL
3.3V
CN3
DMM168-FLAA2-3A133
IC6
IC7
MT48LC8M16A2TG-75
C299
C300
C24
C23
C31
C44
C32
C41
C42
0.1uF
R45
R44
10K

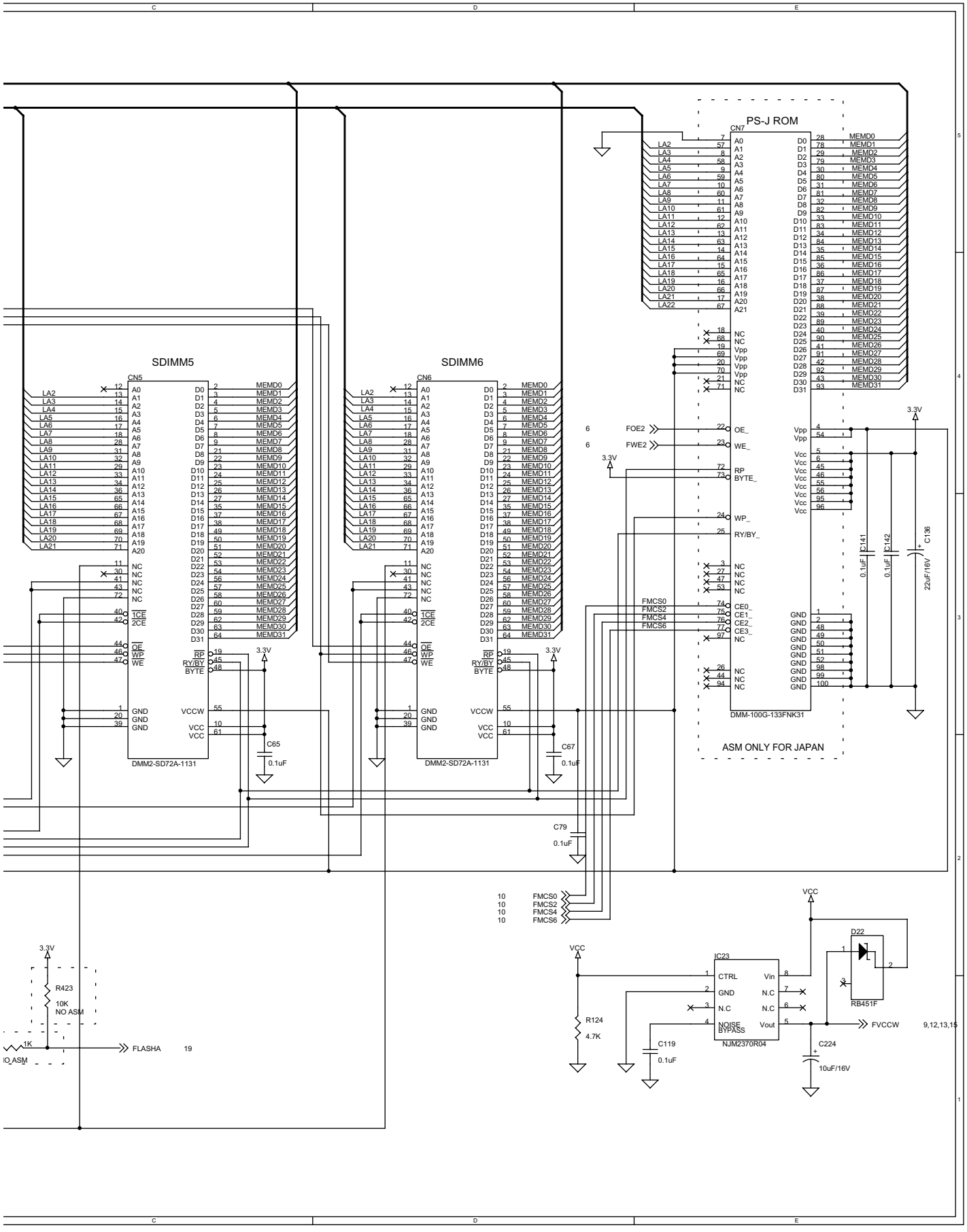
[BUFFER]


2 SYSAD[54:33]
2,4 SYSAD[31:0]
IC21
IC24
IC12
74LCX16244MEA
74LCX16245MEA
74LCX244MTC
3.3V
C293
C294
C91
C295
C296
C116
C62
0.1uF
7,8,10 FOE
FOE2
FWE2
3 ROMBUFOE
3 ROMBUFDIR
LA[22:2] 7,8,10,12
IC11C
74LCX32MTC
21 FWE0
3,10,12 ROMWE
FWE1 7,8
IC26A
74LCX08MTC
3,10 BOOTCS
FMCS9_2 7
16 SLCTIN
10 SLCTIN_P
3 3_LDATA[15:0]
IC34
IC31
74LCX16373MEA
3 ALE
C151
C193
IOA[15:1] 10,11

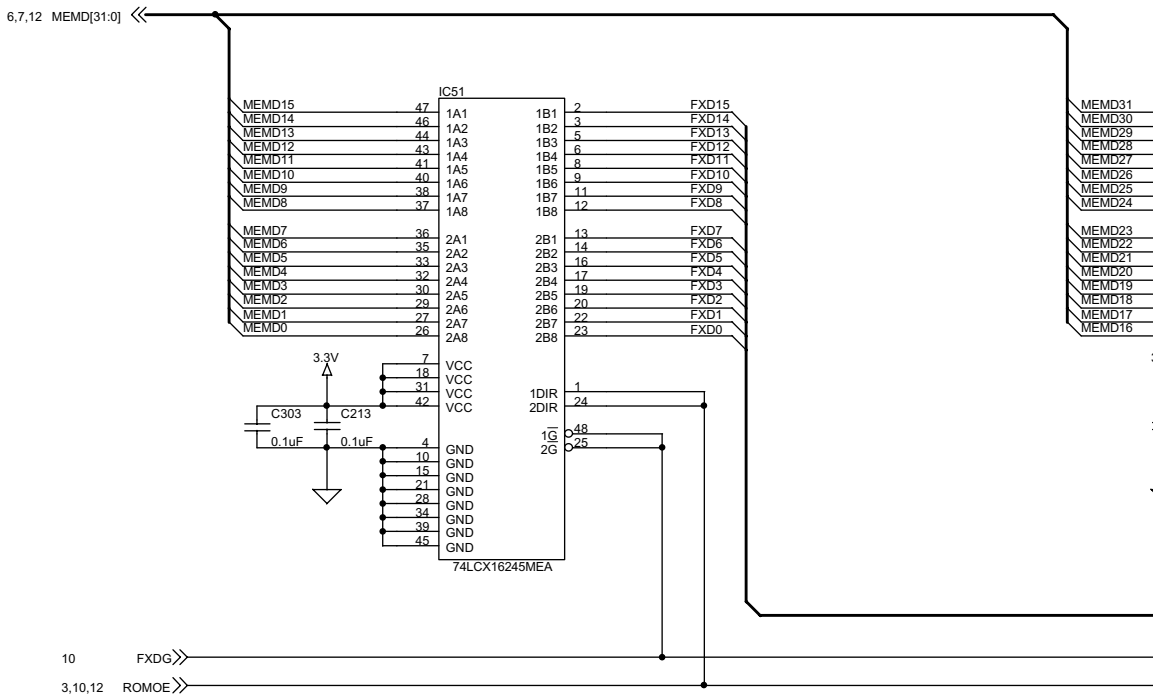

IC24
74LCX16245MEA
IC16
74LCX16245MEA
MEMD[31:0] 7,8,12
ROMBUFOE
ROMBUFDIR
C292
C63
0.1uF
3.3V
10,11 IOD[15:0]
BR89
BR90
BR91
BR92
7,8,12 MEMD[31:0]
BR88
BR87
BR86
BR85
BR84
BR83
BR82
BR81
C139
IC26A
IC26B
74LCX08MTC
FMCS9_2 7
SLCTIN 16
SLCTIN_P 10
SLCTIN2 10
IC31
LDATA15
LDATA14
LDATA13
LDATA12
LDATA11
LDATA10
LDATA9
LDATA8
LDATA7
LDATA6
LDATA5
LDATA4
LDATA3
LDATA2
LDATA1
LDATA0
C193
LOE 3,10
IODG 10
IOD[15:0] 10,11
OA[15:1] 10,11

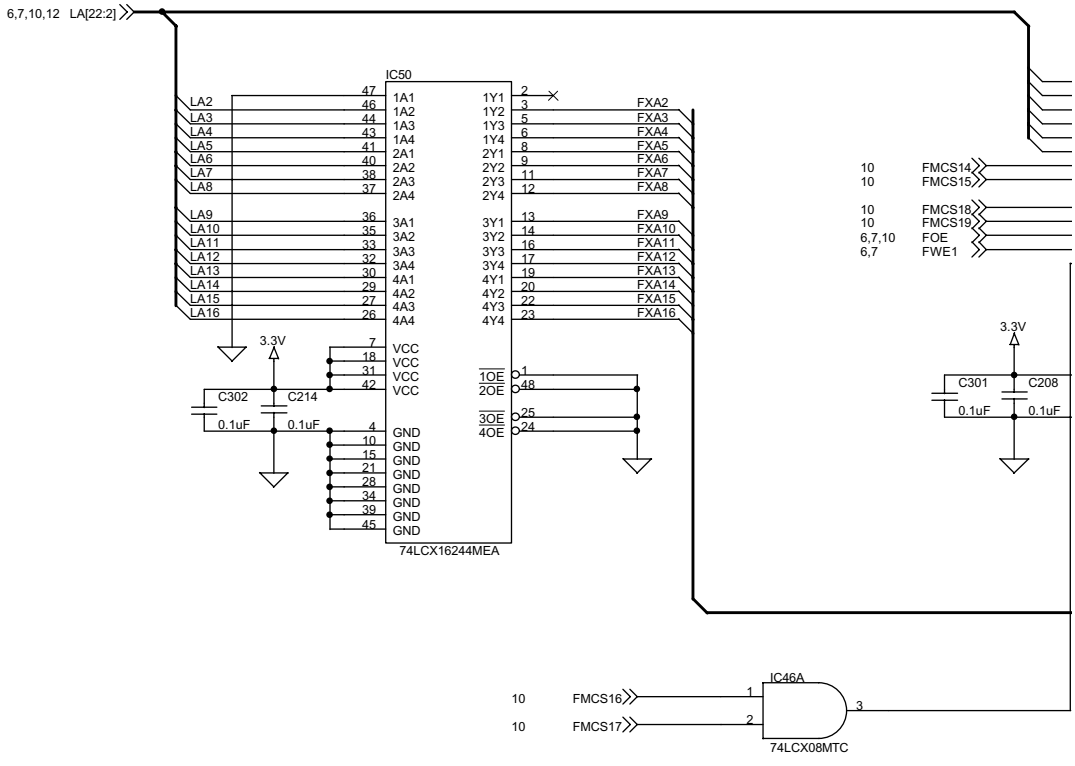
[FLASH SDIMM]

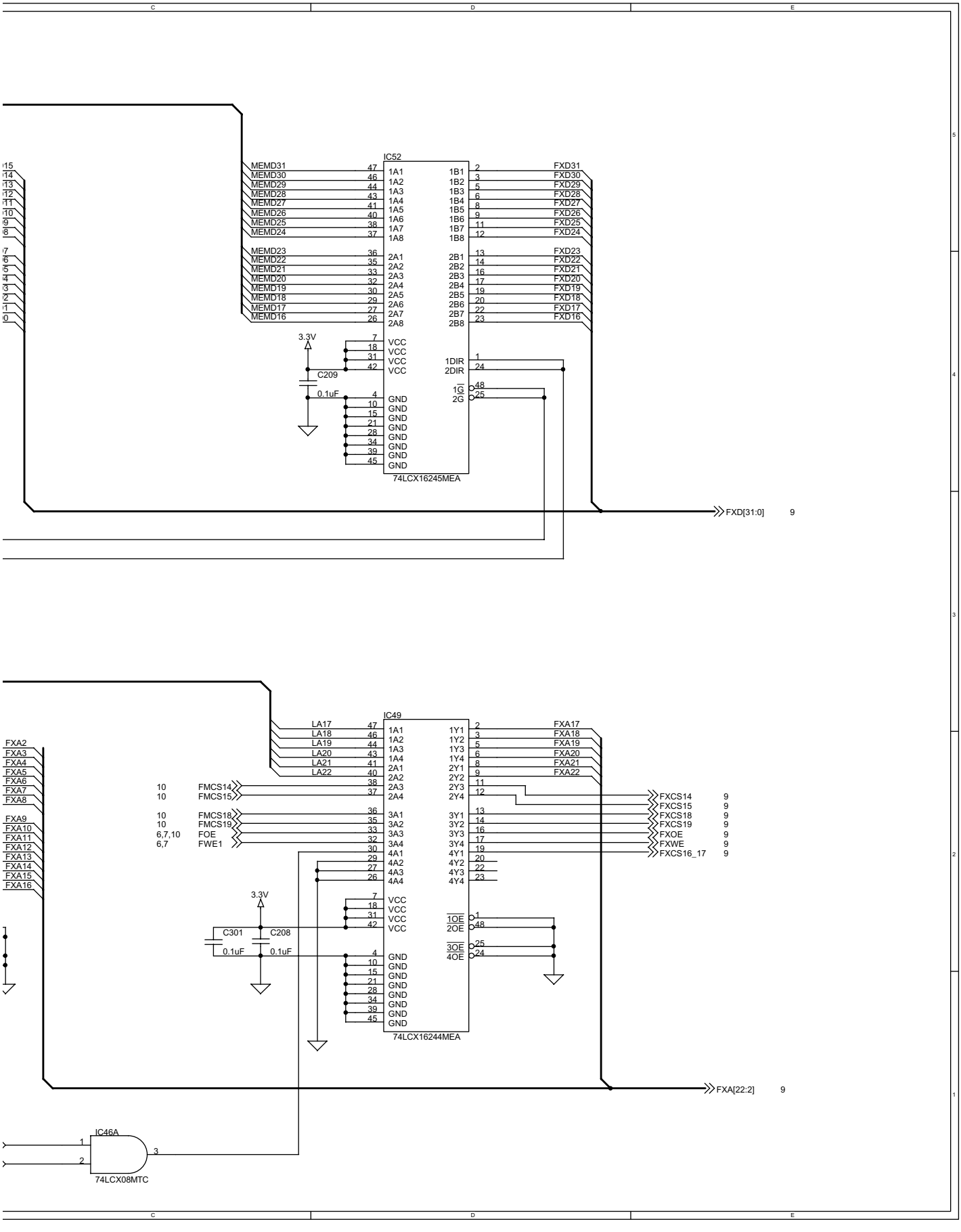

6,8,12 MEMD[31:0]
6,8,10,12 LA[22:2]
6,8,10 FOE
10 WP
6,8 FWE1
3.3V
R93
10K
9,10 RD/BY
1,2,9 COLDRST
SDIMM4
SDIMM5
CN4
CN5
DMM2-SD72A-1131
R141
0
6 FMCS9_2
FMCS9_1
R140
NO ASM
C77
0.1uF
C66
0.1uF
C65
0.1uF
10 FMCS9
10 FMCS11
10 FMCS13
10 FMCS8
10 FMCS10
10 FMCS12
R108
R106
R125
9,12,13,15 FVCCW
JP2
TS3B-SQ
VCCW
L->H
R423
10K
R422
1K
FLASHA 19
C111
10uF/16V
R166


SDIMM5
CN5
SDIMM6
CN6
PS-J ROM
CN7
DMM2-SD72A-1131
DMM2-SD72A-1131
DMM-100G-133FNK31
ASM ONLY FOR JAPAN
3.3V
VCC
C65
0.1uF
C67
0.1uF
C79
0.1uF
C141
0.1uF
C142
0.1uF
C136
22uF/16V
R423
10K
NO ASM
1K
FLASHA
19
R124
4.7K
C119
0.1uF
C224
10uF/16V
IC23
CTRL
GND
N.C
NOISE BYPASS
Vin
N.C
N.C
Vout
NJM2370R04
D22
RB451F
FVCCW
9,12,13,15
FOE2
FWE2
FMCS0
FMCS2
FMCS4
FMCS6

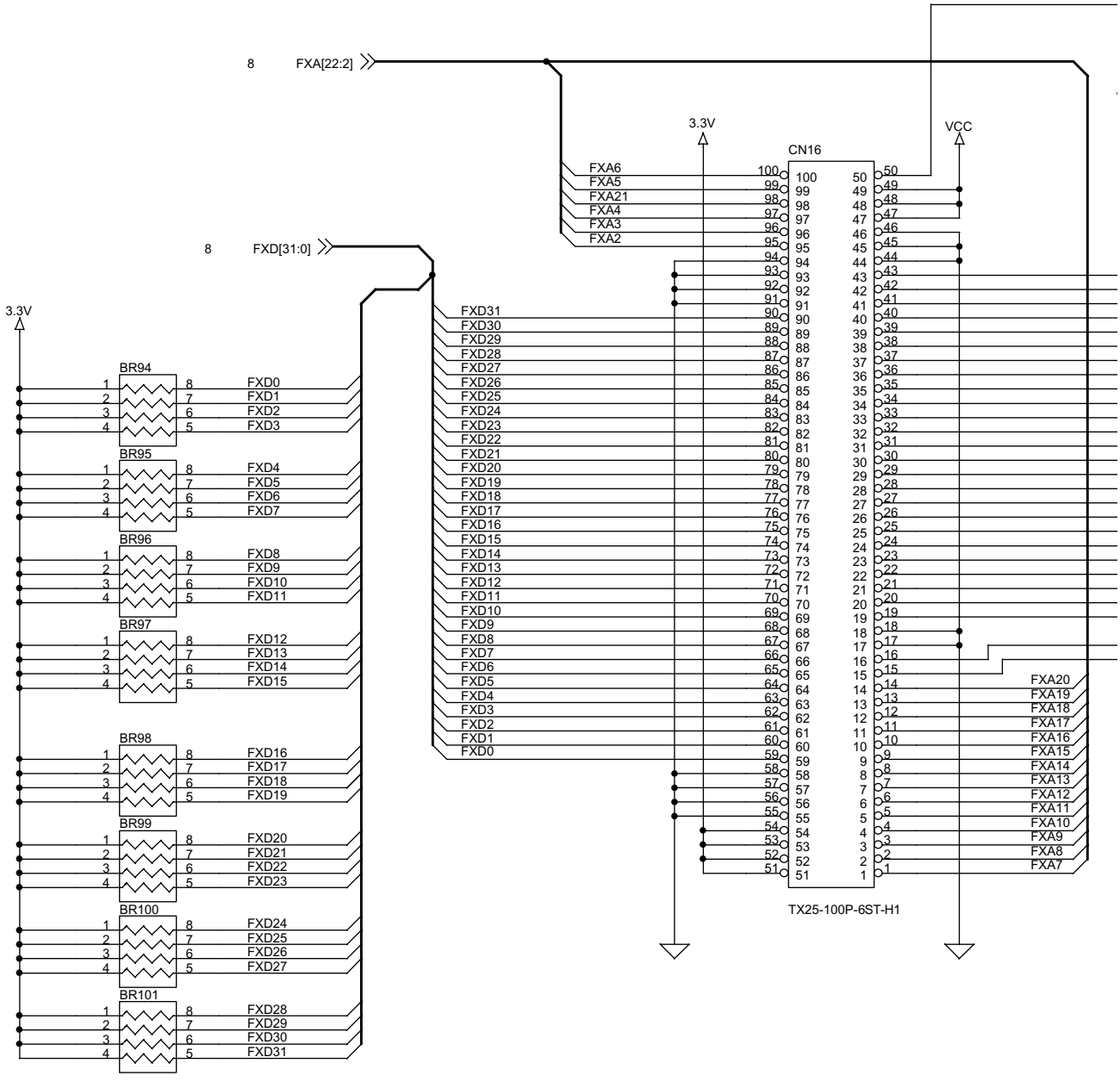
[FAX I/F BUF]

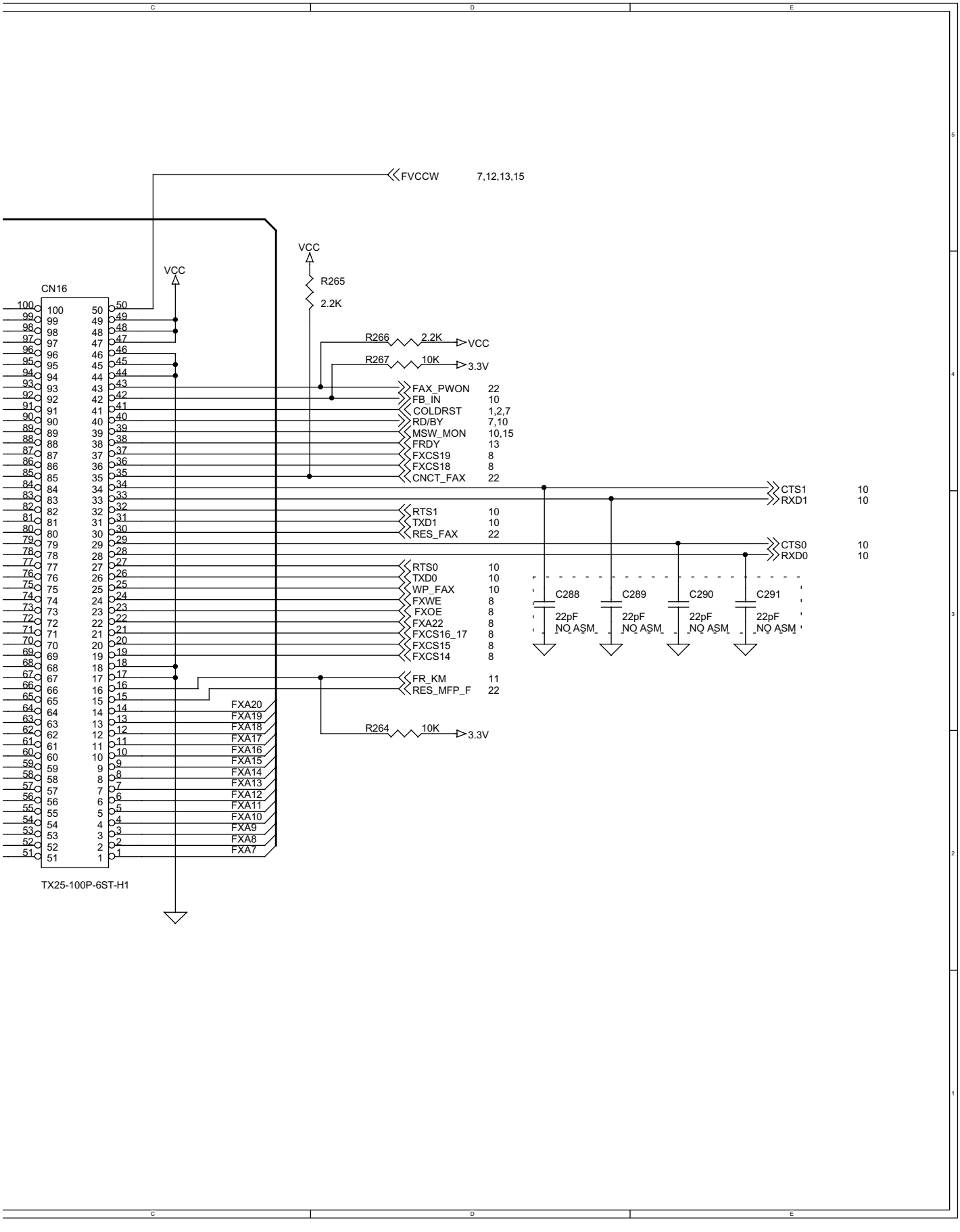

6,7,12 MEMD[31:0]
IC51
MEMD15 47 1A1
MEMD14 46 1A2
MEMD13 44 1A3
MEMD12 43 1A4
MEMD11 41 1A5
MEMD10 40 1A6
MEMD9 38 1A7
MEMD8 37 1A8
MEMD7 36 2A1
MEMD6 35 2A2
MEMD5 33 2A3
MEMD4 32 2A4
MEMD3 30 2A5
MEMD2 29 2A6
MEMD1 27 2A7
MEMD0 26 2A8
1B1 2 FXD15
1B2 3 FXD14
1B3 5 FXD13
1B4 6 FXD12
1B5 8 FXD11
1B6 9 FXD10
1B7 11 FXD9
1B8 12 FXD8
2B1 13 FXD7
2B2 14 FXD6
2B3 16 FXD5
2B4 17 FXD4
2B5 19 FXD3
2B6 20 FXD2
2B7 22 FXD1
2B8 23 FXD0
3.3V
7 VCC
18 VCC
31 VCC
42 VCC
C303 0.1uF
C213 0.1uF
1DIR 1
2DIR 24
1G 48
2G 25
4 GND
10 GND
15 GND
21 GND
28 GND
34 GND
39 GND
45 GND
74LCX16245MEA
MEMD31
MEMD30
MEMD29
MEMD28
MEMD27
MEMD26
MEMD25
MEMD24
MEMD23
MEMD22
MEMD21
MEMD20
MEMD19
MEMD18
MEMD17
MEMD16
10 FXDG
3,10,12 ROMOE

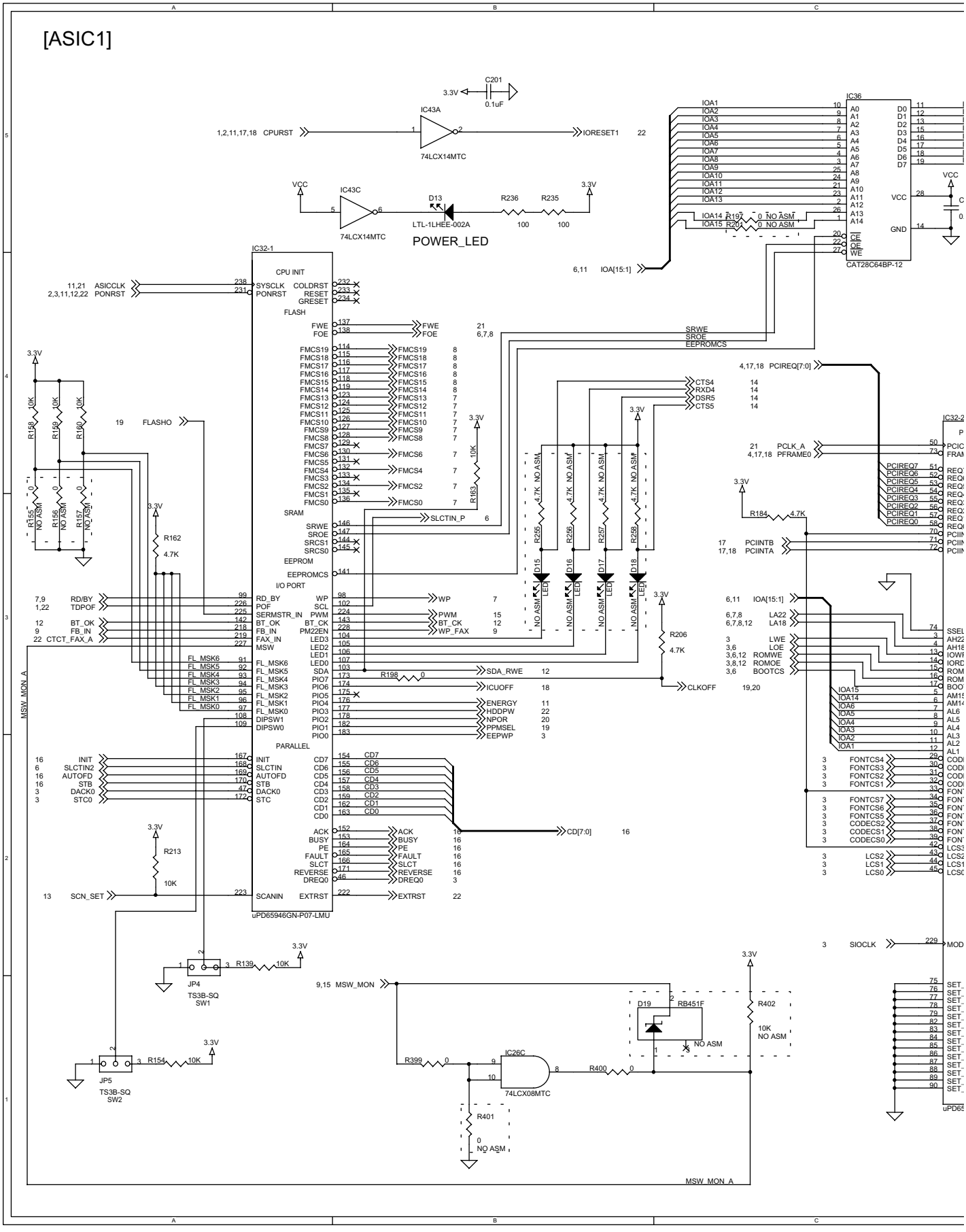

6,7,10,12 LA[22:2]
IC50
LA2 47 1A1
LA3 46 1A2
LA4 44 1A3
LA5 43 1A4
LA6 41 2A1
LA7 40 2A2
LA8 38 2A3
37 2A4
LA9 36 3A1
LA10 35 3A2
LA11 33 3A3
LA12 32 3A4
LA13 30 4A1
LA14 29 4A2
LA15 27 4A3
LA16 26 4A4
1Y1 2 FXA2
1Y2 3 FXA3
1Y3 5 FXA4
1Y4 6 FXA5
2Y1 8 FXA6
2Y2 9 FXA7
2Y3 11 FXA8
2Y4 12
3Y1 13 FXA9
3Y2 14 FXA10
3Y3 16 FXA11
3Y4 17 FXA12
4Y1 19 FXA13
4Y2 20 FXA14
4Y3 22 FXA15
4Y4 23 FXA16
3.3V
7 VCC
18 VCC
31 VCC
42 VCC
C302 0.1uF
C214 0.1uF
1OE 1
2OE 48
3OE 25
4OE 24
4 GND
10 GND
15 GND
21 GND
28 GND
34 GND
39 GND
45 GND
74LCX16244MEA
10 FMCS14
10 FMCS15
10 FMCS18
10 FMCS19
6,7,10 FOE
6,7 FWE1
3.3V
C301 0.1uF
C208 0.1uF
IC46A
10 FMCS16
10 FMCS17
1
2
3
74LCX08MTC

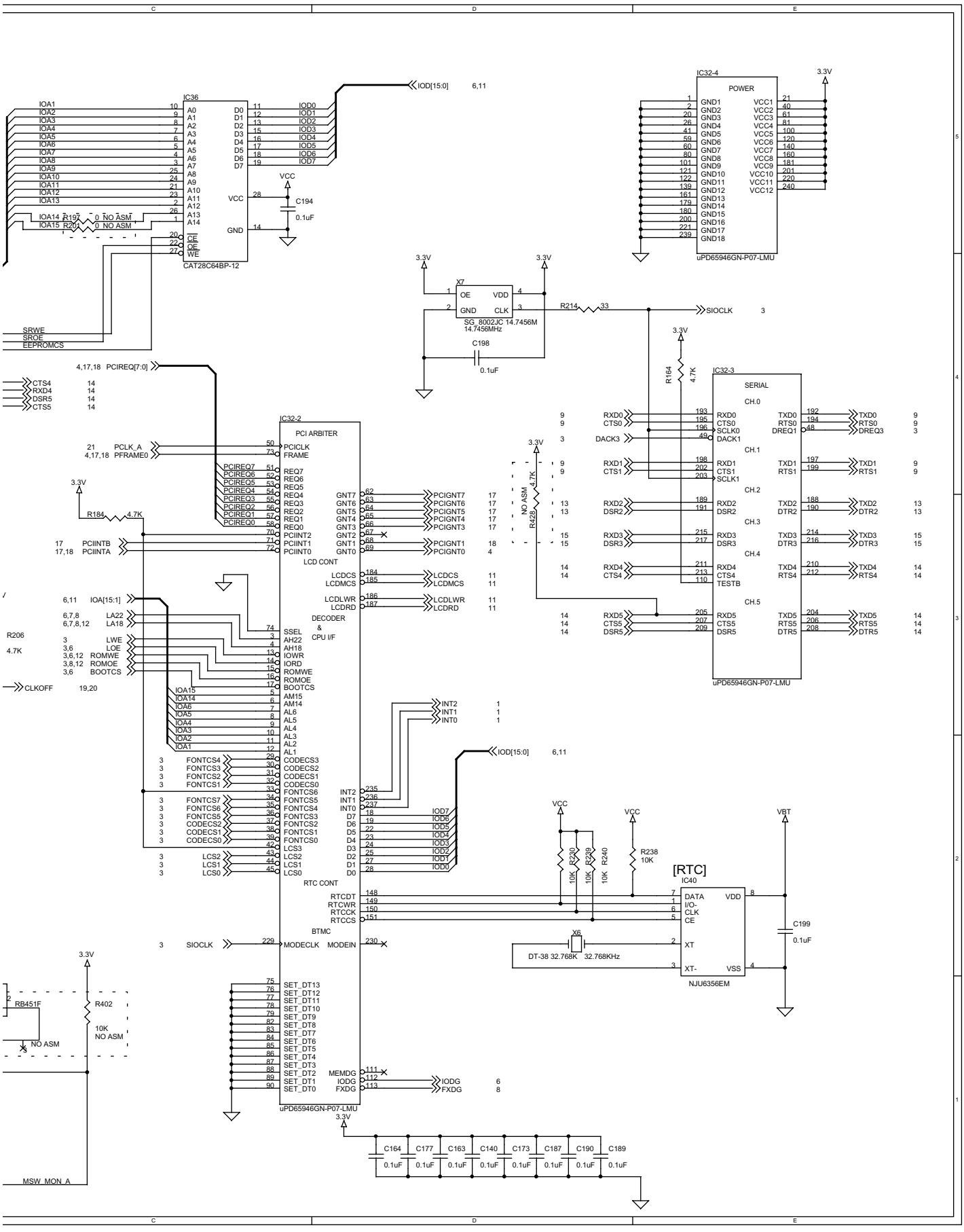

IC52
MEMD31
MEMD30
MEMD29
MEMD28
MEMD27
MEMD26
MEMD25
MEMD24
MEMD23
MEMD22
MEMD21
MEMD20
MEMD19
MEMD18
MEMD17
MEMD16
1A1
1A2
1A3
1A4
1A5
1A6
1A7
1A8
2A1
2A2
2A3
2A4
2A5
2A6
2A7
2A8
1B1
1B2
1B3
1B4
1B5
1B6
1B7
1B8
2B1
2B2
2B3
2B4
2B5
2B6
2B7
2B8
FXD31
FXD30
FXD29
FXD28
FXD27
FXD26
FXD25
FXD24
FXD23
FXD22
FXD21
FXD20
FXD19
FXD18
FXD17
FXD16
3.3V
VCC
1DIR
2DIR
1G
2G
C209
0.1uF
GND
74LCX16245MEA
FXD[31:0]
9
IC49
LA17
LA18
LA19
LA20
LA21
LA22
FXA17
FXA18
FXA19
FXA20
FXA21
FXA22
FMCS14
FMCS15
FMCS18
FMCS19
FOE
FWE1
FXCS14
FXCS15
FXCS18
FXCS19
FXOE
FXWE
FXCS16_17
C301
C208
1OE
2OE
3OE
4OE
74LCX16244MEA
FXA[22:2]
IC46A
74LCX08MTC

[FAX I/F CN]

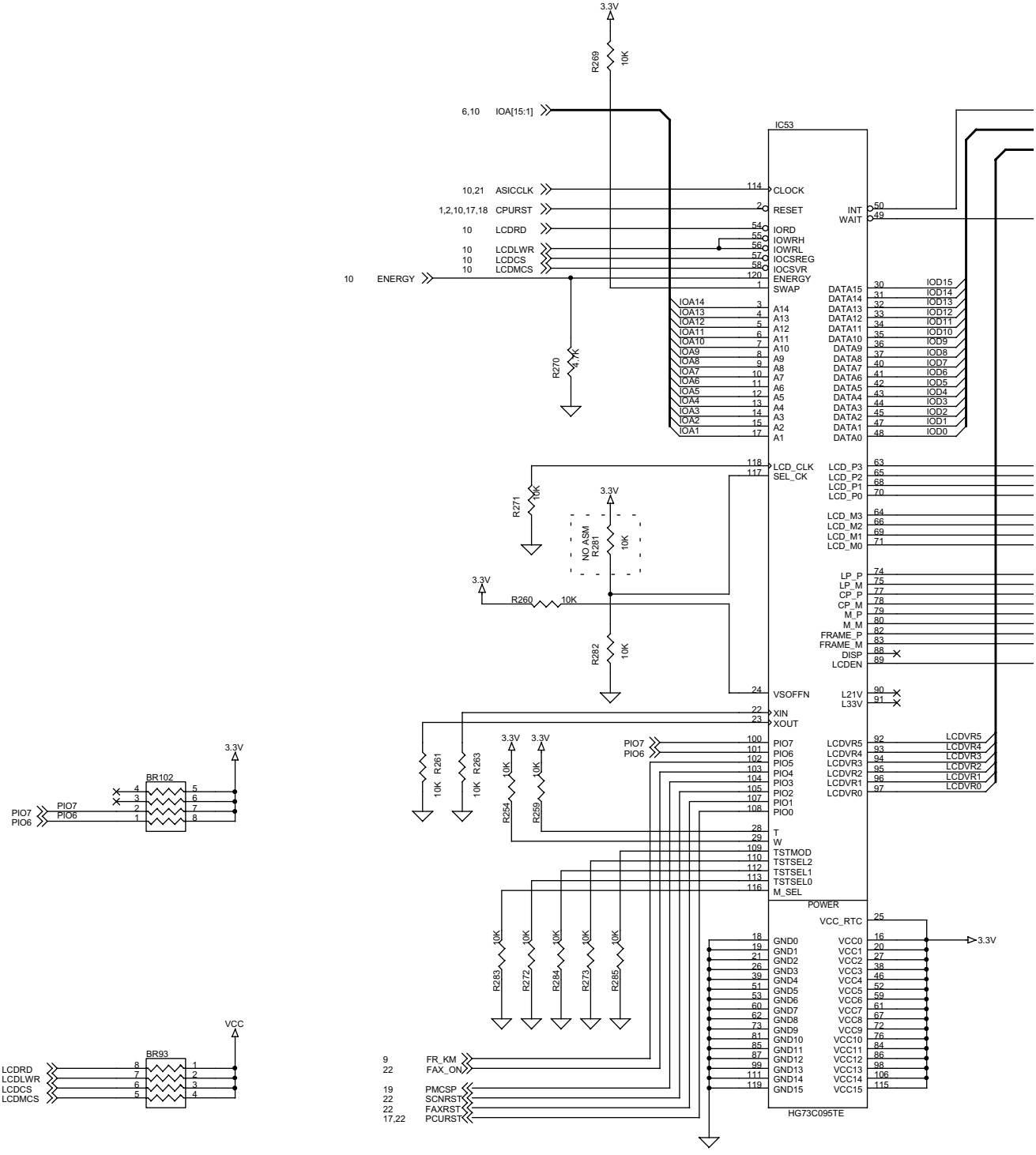

8 FXA[22:2]
8 FXD[31:0]
3.3V
VCC
CN16
FXA6
FXA5
FXA21
FXA4
FXA3
FXA2
FXD31
FXD30
FXD29
FXD28
FXD27
FXD26
FXD25
FXD24
FXD23
FXD22
FXD21
FXD20
FXD19
FXD18
FXD17
FXD16
FXD15
FXD14
FXD13
FXD12
FXD11
FXD10
FXD9
FXD8
FXD7
FXD6
FXD5
FXD4
FXD3
FXD2
FXD1
FXD0
FXA20
FXA19
FXA18
FXA17
FXA16
FXA15
FXA14
FXA13
FXA12
FXA11
FXA10
FXA9
FXA8
FXA7
TX25-100P-6ST-H1
BR94
BR95
BR96
BR97
BR98
BR99
BR100
BR101

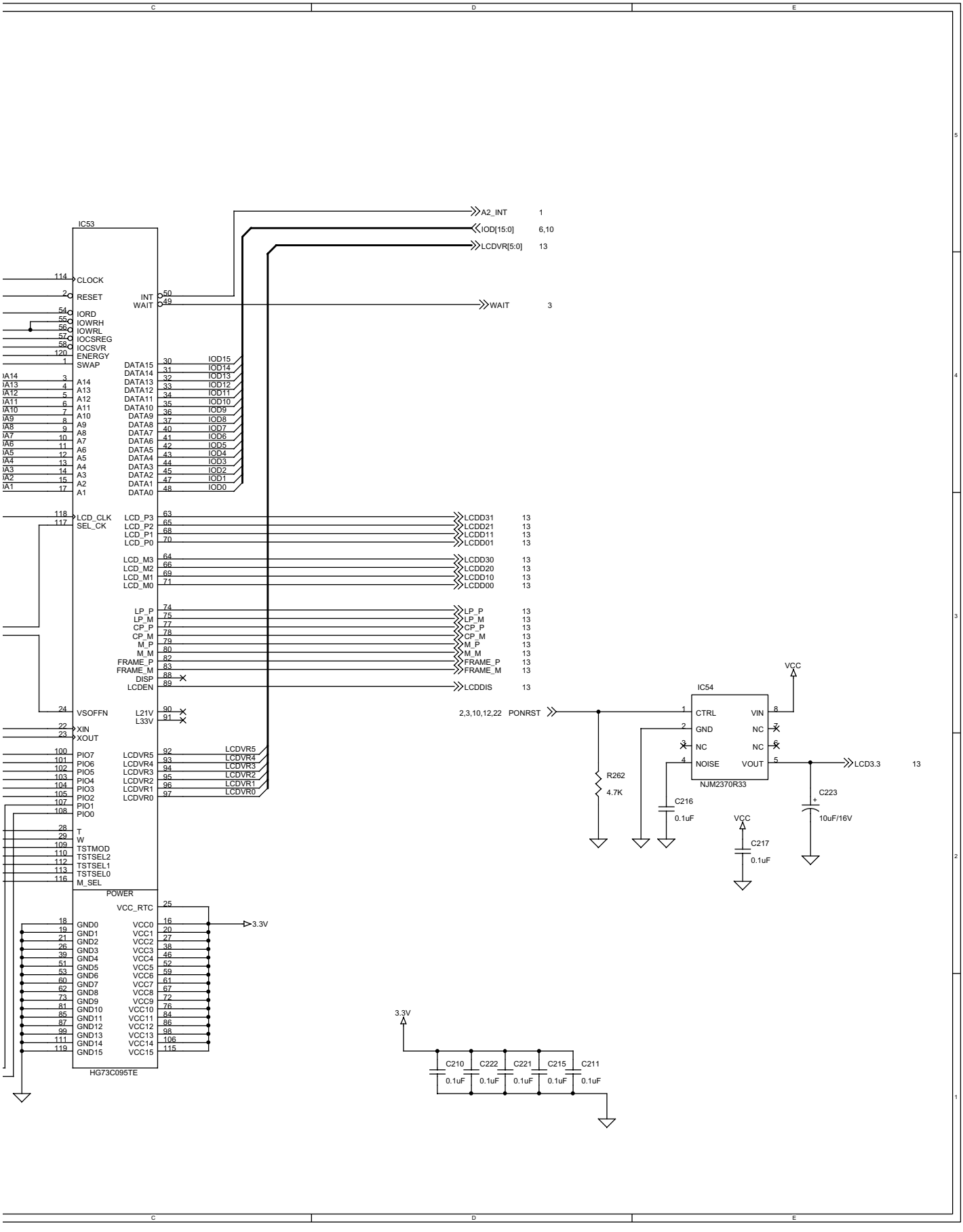

FVCCW 7,12,13,15
VCC
R265
2.2K
VCC
CN16
R266 2.2K VCC
R267 10K 3.3V
FAX_PWON 22
FB_IN 10
COLDRST 1,2,7
RD/BY 7,10
MSW_MON 10,15
FRDY 13
FXCS19 8
FXCS18 8
CNCT_FAX 22
CTS1 10
RXD1 10
RTS1 10
TXD1 10
RES_FAX 22
CTS0 10
RXD0 10
RTS0 10
TXD0 10
WP_FAX 10
FXWE 8
FXOE 8
FXA22 8
FXCS16_17 8
FXCS15 8
FXCS14 8
C288 22pF NO ASM
C289 22pF NO ASM
C290 22pF NO ASM
C291 22pF NO ASM
FR_KM 11
RES_MFP_F 22
R264 10K 3.3V
FXA20
FXA19
FXA18
FXA17
FXA16
FXA15
FXA14
FXA13
FXA12
FXA11
FXA10
FXA9
FXA8
FXA7
TX25-100P-6ST-H1


[ASIC1]
POWER_LED
IC32-1
CPU INIT
FLASH
SRAM
EEPROM
I/O PORT
PARALLEL
uPD65946GN-P07-LMU
IC36
CAT28C64BP-12
74LCX14MTC
74LCX08MTC
LTL-1LHEE-002A
TS3B-SQ SW1
TS3B-SQ SW2
MSW_MON_A

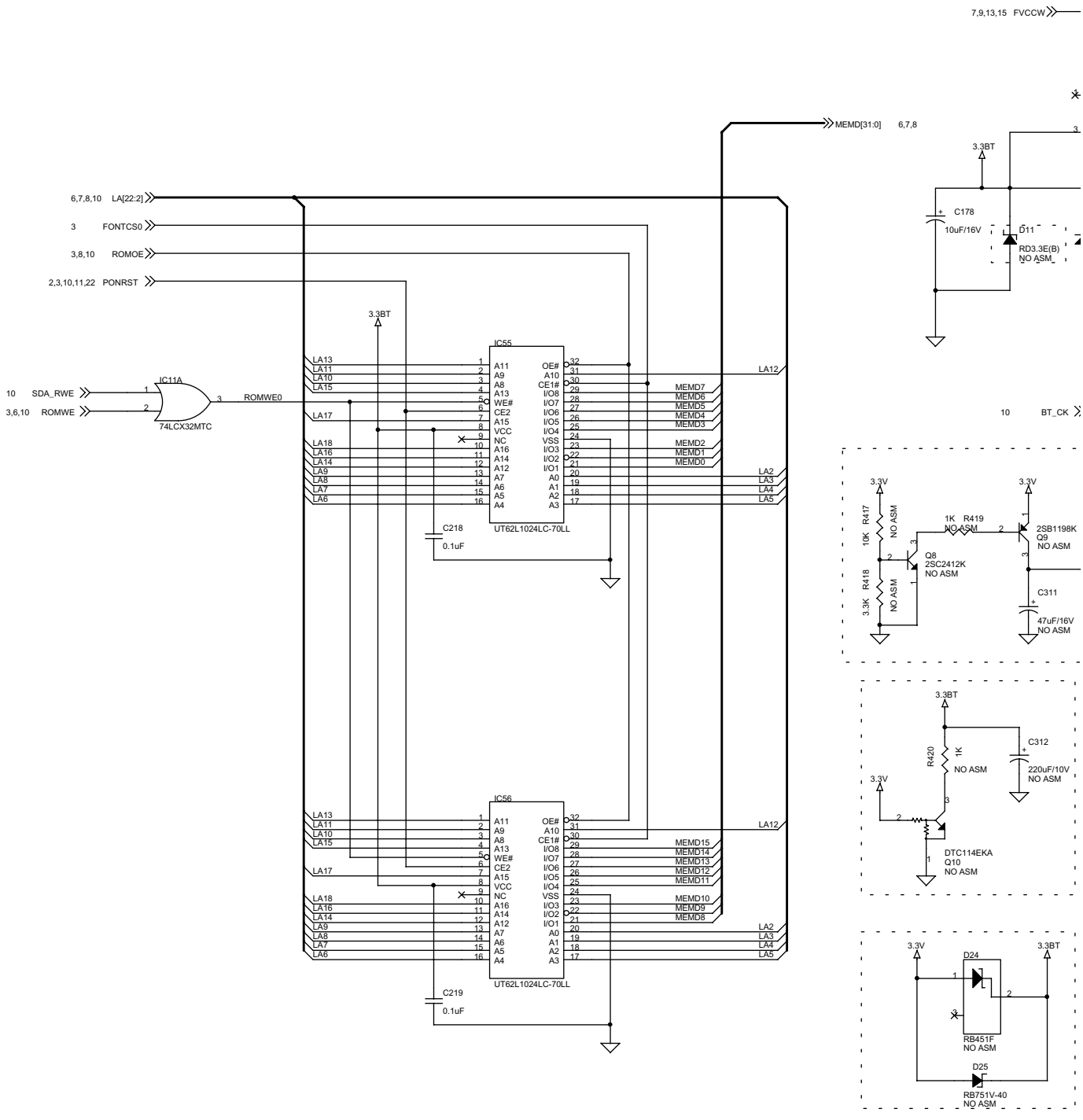

IC36
CAT28C64BP-12
IOD[15:0] 6,11
IOA1
IOA2
IOA3
IOA4
IOA5
IOA6
IOA7
IOA8
IOA9
IOA10
IOA11
IOA12
IOA13
IOA14 R197 0 NO ASM
IOA15 R20 0 NO ASM
VCC
C194
0.1uF
SRWE
SROE
EEPROMCS
IC32-4
POWER
uPD65946GN-P07-LMU
3.3V
X7
SG_8002JC 14.7456M
14.7456MHz
R214 33
SIOCLK 3
C198
0.1uF
R164 4.7K
IC32-3
SERIAL
CH.0
CH.1
CH.2
CH.3
CH.4
CH.5
TESTB
uPD65946GN-P07-LMU
4,17,18 PCIREQ[7:0]
CTS4 14
RXD4 14
DSR5 14
CTS5 14
IC32-2
PCI ARBITER
PCICLK
FRAME
REQ7
REQ6
REQ5
REQ4
REQ3
REQ2
REQ1
REQ0
PCIINT2
PCIINT1
PCIINT0
GNT7
GNT6
GNT5
GNT4
GNT3
GNT2
GNT1
GNT0
LCD CONT
LCDCS
LCDMCS
LCDLWR
LCDRD
DECODER
&
CPU I/F
SSEL
AH22
AH18
IOWR
IORD
ROMWE
ROMOE
BOOTCS
AM15
AM14
AL6
AL5
AL4
AL3
AL2
AL1
CODECS3
CODECS2
CODECS1
CODECS0
FONTCS6
FONTCS5
FONTCS4
FONTCS3
FONTCS2
FONTCS1
FONTCS0
LCS3
LCS2
LCS1
LCS0
D7
D6
D5
D4
D3
D2
D1
D0
RTC CONT
RTCDT
RTCWR
RTCCK
RTCCS
BTMC
MODECLK
MODEIN
SET_DT13
SET_DT12
SET_DT11
SET_DT10
SET_DT9
SET_DT8
SET_DT7
SET_DT6
SET_DT5
SET_DT4
SET_DT3
SET_DT2
SET_DT1
SET_DT0
MEMDG
IODG
FXDG
uPD65946GN-P07-LMU
R184 4.7K
R206 4.7K
R428 4.7K NO ASM
CLKOFF 19,20
INT2
INT1
INT0
R230 10K
R239 10K
R240 10K
R238 10K
[RTC]
IC40
DATA I/O-
CLK
CE
XT
XT-
VDD
VSS
NJU6356EM
X6
DT-38 32.768K 32.768KHz
C199
0.1uF
VBT
RB451F
R402 10K NO ASM
MSW_MON_A
C164 C177 C163 C140 C173 C187 C190 C189
0.1uF

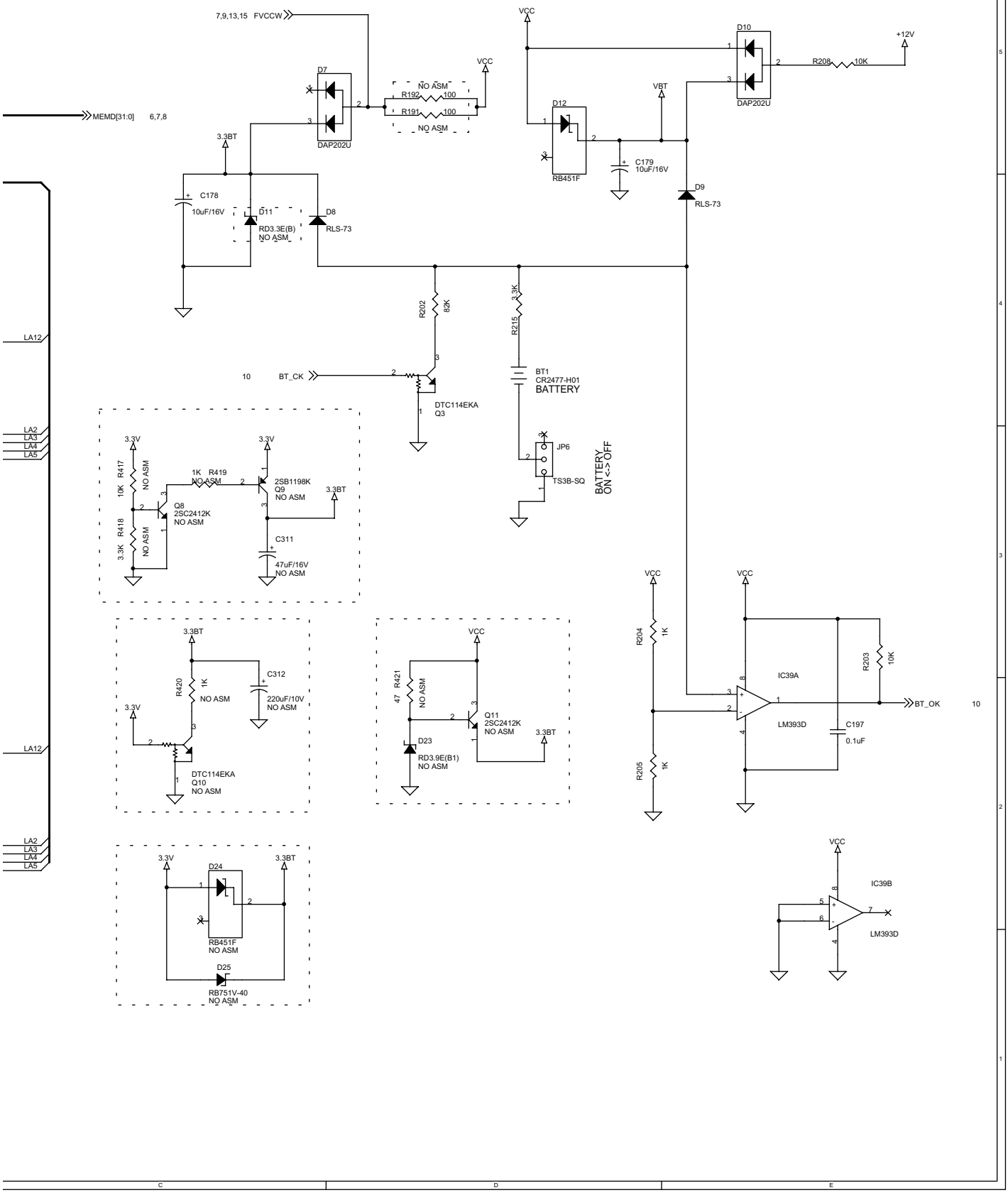
[ASIC2]

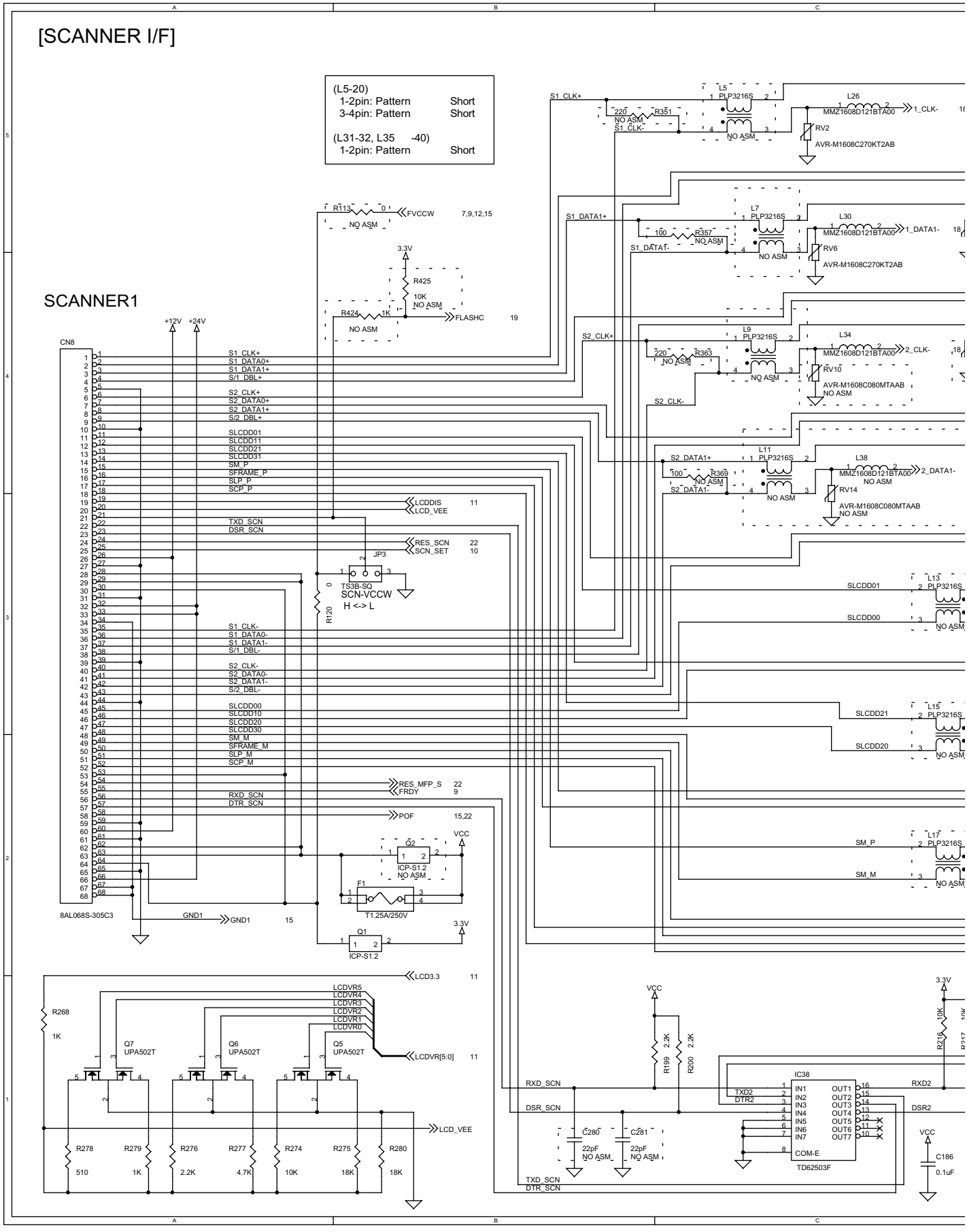

3.3V
R269
10K
6,10 IOA[15:1]
IC53
10,21 ASICCLK
1,2,10,17,18 CPURST
10 LCDRD
10 LCDLWR
10 LCDCS
10 LCDMCS
10 ENERGY
CLOCK
RESET
IORD
IOWRH
IOWRL
IOCSREG
IOCSVR
ENERGY
SWAP
INT
WAIT
IOA14 IOA13 IOA12 IOA11 IOA10 IOA9 IOA8 IOA7 IOA6 IOA5 IOA4 IOA3 IOA2 IOA1
A14 A13 A12 A11 A10 A9 A8 A7 A6 A5 A4 A3 A2 A1
DATA15 DATA14 DATA13 DATA12 DATA11 DATA10 DATA9 DATA8 DATA7 DATA6 DATA5 DATA4 DATA3 DATA2 DATA1 DATA0
IOD15 IOD14 IOD13 IOD12 IOD11 IOD10 IOD9 IOD8 IOD7 IOD6 IOD5 IOD4 IOD3 IOD2 IOD1 IOD0
R270
4.7K
LCD_CLK
SEL_CK
LCD_P3 LCD_P2 LCD_P1 LCD_P0
LCD_M3 LCD_M2 LCD_M1 LCD_M0
LP_P LP_M CP_P CP_M M_P M_M FRAME_P FRAME_M DISP LCDEN
R271
10K
NO ASM
R261
R260
R282
VSOFFN
L21V
L33V
XIN
XOUT
R261 R263
R254 R259
PIO7 PIO6
LCDVR5 LCDVR4 LCDVR3 LCDVR2 LCDVR1 LCDVR0
T
W
TSTMOD
TSTSEL2
TSTSEL1
TSTSEL0
M_SEL
POWER
VCC_RTC
GND0 GND1 GND2 GND3 GND4 GND5 GND6 GND7 GND8 GND9 GND10 GND11 GND12 GND13 GND14 GND15
VCC0 VCC1 VCC2 VCC3 VCC4 VCC5 VCC6 VCC7 VCC8 VCC9 VCC10 VCC11 VCC12 VCC13 VCC14 VCC15
R263 R272 R284 R273 R285
HG73C095TE
BR102
PIO7
PIO6
BR93
VCC
LCDRD
LCDLWR
LCDCS
LCDMCS
9 FR_KM
22 FAX_ON
19 PMCSP
22 SCNRST
22 FAXRST
17,22 PCURST

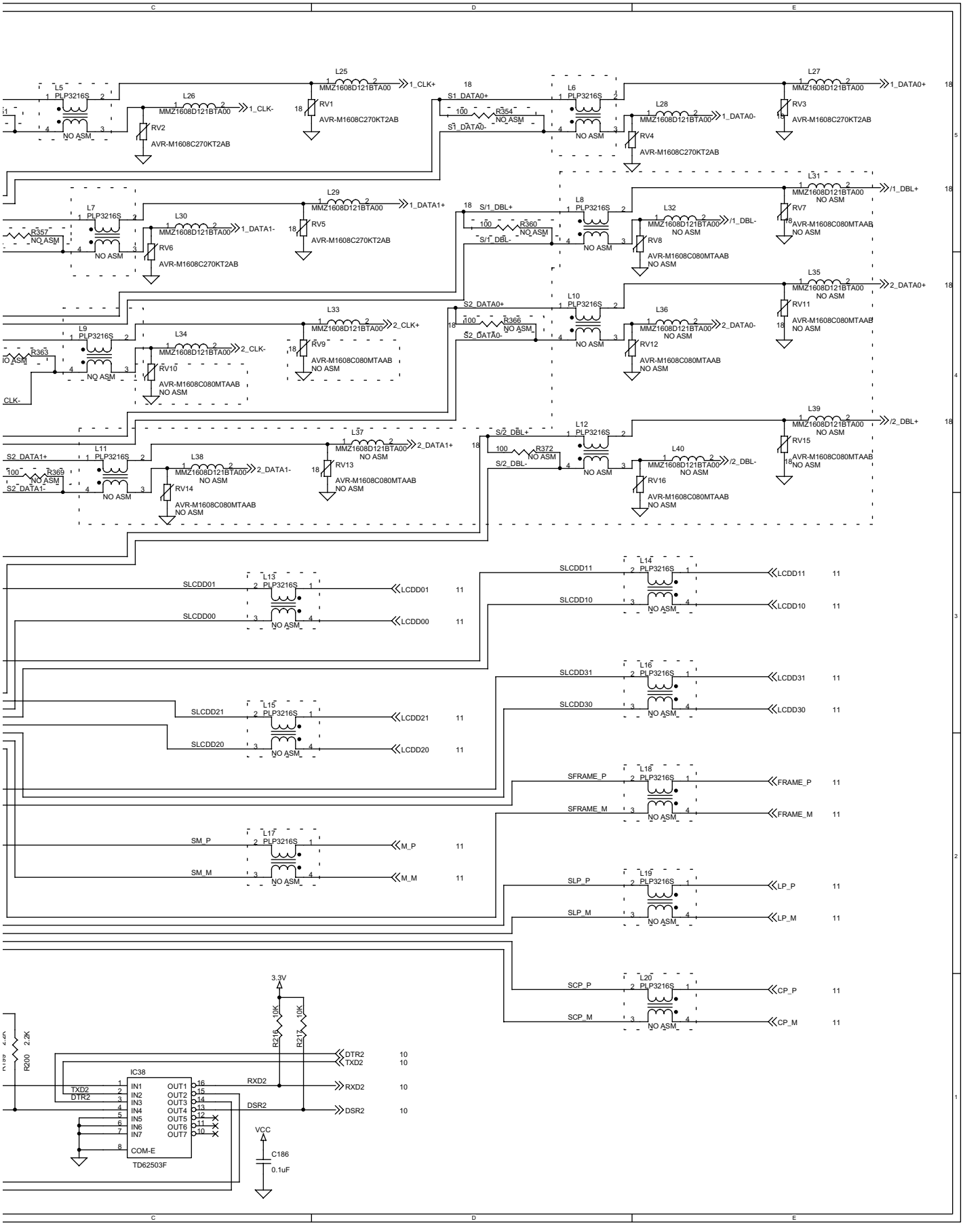

IC53
CLOCK
RESET
IORD
IOWRH
IOWRL
IOCSREG
IOCSVR
ENERGY
SWAP
A14
A13
A12
A11
A10
A9
A8
A7
A6
A5
A4
A3
A2
A1
LCD_CLK
SEL_CK
VSOFFN
XIN
XOUT
PIO7
PIO6
PIO5
PIO4
PIO3
PIO2
PIO1
PIO0
T
W
TSTMOD
TSTSEL2
TSTSEL1
TSTSEL0
M_SEL
POWER
VCC_RTC
GND0
GND1
GND2
GND3
GND4
GND5
GND6
GND7
GND8
GND9
GND10
GND11
GND12
GND13
GND14
GND15
VCC0
VCC1
VCC2
VCC3
VCC4
VCC5
VCC6
VCC7
VCC8
VCC9
VCC10
VCC11
VCC12
VCC13
VCC14
VCC15
HG73C095TE
INT
WAIT
DATA15
DATA14
DATA13
DATA12
DATA11
DATA10
DATA9
DATA8
DATA7
DATA6
DATA5
DATA4
DATA3
DATA2
DATA1
DATA0
LCD_P3
LCD_P2
LCD_P1
LCD_P0
LCD_M3
LCD_M2
LCD_M1
LCD_M0
LP_P
LP_M
CP_P
CP_M
M_P
M_M
FRAME_P
FRAME_M
DISP
LCDEN
L21V
L33V
LCDVR5
LCDVR4
LCDVR3
LCDVR2
LCDVR1
LCDVR0
A2_INT 1
IOD[15:0] 6,10
LCDVR[5:0] 13
WAIT 3
IOD15
IOD14
IOD13
IOD12
IOD11
IOD10
IOD9
IOD8
IOD7
IOD6
IOD5
IOD4
IOD3
IOD2
IOD1
IOD0
LCDD31 13
LCDD21 13
LCDD11 13
LCDD01 13
LCDD30 13
LCDD20 13
LCDD10 13
LCDD00 13
LP_P 13
LP_M 13
CP_P 13
CP_M 13
M_P 13
M_M 13
FRAME_P 13
FRAME_M 13
LCDDIS 13
2,3,10,12,22 PONRST
3.3V
IC54
CTRL
GND
NC
NOISE
VIN
NC
NC
VOUT
NJM2370R33
LCD3.3 13
VCC
R262
4.7K
C216
0.1uF
C217
0.1uF
C223
10uF/16V
C210
C222
C221
C215
C211
0.1uF

[SRAM / BATTERY]



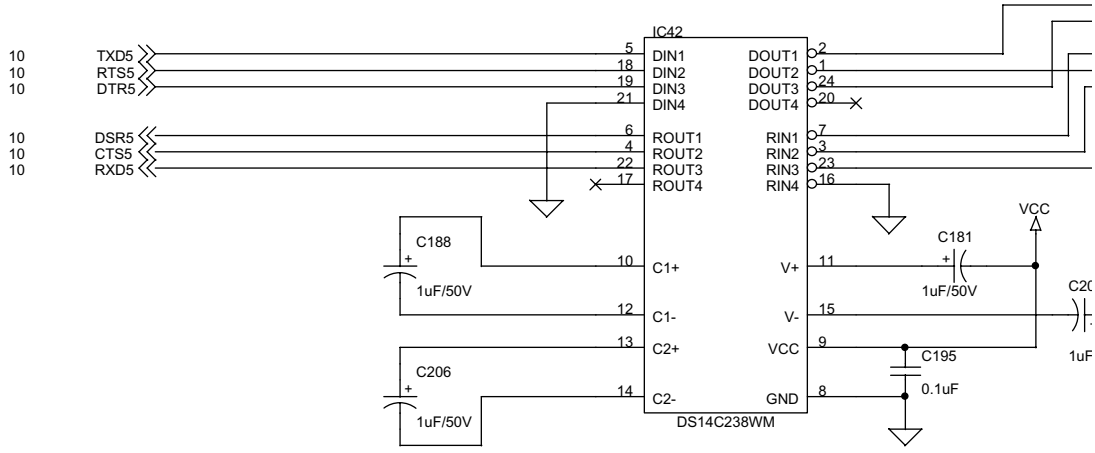

7,9,13,15 FVCCW
MEMD[31:0] 6,7,8
VCC
D7
DAP202U
R192 100
R191 100
NO ASM
3.3BT
C178
10uF/16V
D11
RD3.3E(B)
NO ASM
D8
RLS-73
D10
DAP202U
+12V
R208 10K
D12
RB451F
VBT
C179
10uF/16V
D9
RLS-73
R202 82K
R215 3.3K
BT1
CR2477-H01
BATTERY
10 BT_CK
DTC114EKA
Q3
JP6
TS3B-SQ
BATTERY
ON <-> OFF
LA12
LA2
LA3
LA4
LA5
3.3V
R417 10K NO ASM
R418 3.3K NO ASM
1K R419 NO ASM
Q8
2SC2412K
NO ASM
2SB1198K
Q9
NO ASM
C311
47uF/16V
NO ASM
R420 1K NO ASM
C312
220uF/10V
NO ASM
DTC114EKA
Q10
NO ASM
R421 47 NO ASM
Q11
2SC2412K
NO ASM
D23
RD3.9E(B1)
NO ASM
R204 1K
R205 1K
IC39A
LM393D
R203 10K
C197
0.1uF
BT_OK 10
IC39B
LM393D
D24
RB451F
NO ASM
D25
RB751V-40
NO ASM


[SCANNER I/F]
SCANNER1
(L5-20)
1-2pin: Pattern Short
3-4pin: Pattern Short
(L31-32, L35 -40)
1-2pin: Pattern Short
CN8
8AL068S-305C3
+12V
+24V
3.3V
GND1
S1_CLK+
S1_DATA0+
S1_DATA1+
S/1_DBL+
S2_CLK+
S2_DATA0+
S2_DATA1+
S/2_DBL+
SLCDD01
SLCDD11
SLCDD21
SLCDD31
SM_P
SFRAME_P
SLP_P
SCP_P
TXD_SCN
DSR_SCN
S1_CLK-
S1_DATA0-
S1_DATA1-
S/1_DBL-
S2_CLK-
S2_DATA0-
S2_DATA1-
S/2_DBL-
SLCDD00
SLCDD10
SLCDD20
SLCDD30
SM_M
SFRAME_M
SLP_M
SCP_M
RXD_SCN
DTR_SCN
R113
FVCCW
NO ASM
R425
10K
R424
1K
FLASHC
LCDDIS
LCD_VEE
RES_SCN
SCN_SET
JP3
TS3B-SQ
SCN-VCCW
H <-> L
R120
RES_MFP_S
FRDY
POF
Q2
ICP-S1.2
F1
T1.25A/250V
Q1
LCD3.3
LCDVR5
LCDVR4
LCDVR3
LCDVR2
LCDVR1
LCDVR0
LCDVR[5:0]
R268
1K
Q7
UPA502T
Q6
UPA502T
Q5
UPA502T
LCD_VEE
R278
510
R279
1K
R276
2.2K
R277
4.7K
R274
10K
R275
18K
R280
18K
L5
PLP3216S
L26
MMZ1608D121BTA00
RV2
AVR-M1608C270KT2AB
R351
220
L7
L30
RV6
R357
100
L9
L34
RV10
AVR-M1608C080MTAAB
R363
L11
L38
RV14
R369
L13
L15
L17
SM_P
SM_M
VCC
R199
2.2K
R200
2.2K
IC38
TD62503F
IN1
IN2
IN3
IN4
IN5
IN6
IN7
COM-E
OUT1
OUT2
OUT3
OUT4
OUT5
OUT6
OUT7
TXD2
DTR2
RXD2
DSR2
C280
22pF
C281
22pF
R216
10K
C186
0.1uF

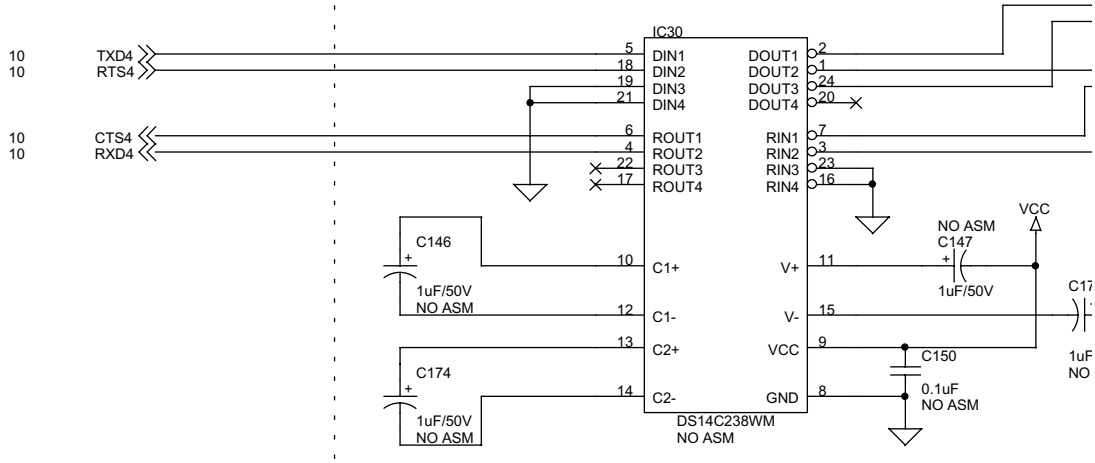

L5 PLP3216S
L26 MMZ1608D121BTA00
1_CLK-
RV2 AVR-M1608C270KT2AB
NO ASM
L25 MMZ1608D121BTA00
1_CLK+
RV1 AVR-M1608C270KT2AB
S1_DATA0+
R354 100 NO ASM
S1_DATA0-
L6 PLP3216S
L28 MMZ1608D121BTA00
1_DATA0-
RV4 AVR-M1608C270KT2AB
L27 MMZ1608D121BTA00
1_DATA0+
RV3 AVR-M1608C270KT2AB
L7 PLP3216S
R357 NO ASM
L30 MMZ1608D121BTA00
1_DATA1-
RV6 AVR-M1608C270KT2AB
L29 MMZ1608D121BTA00
1_DATA1+
RV5 AVR-M1608C270KT2AB
S/1_DBL+
R360 100 NO ASM
S/1_DBL-
L8 PLP3216S
L32 MMZ1608D121BTA00 NO ASM
/1_DBL-
RV8 AVR-M1608C080MTAAB NO ASM
L31 MMZ1608D121BTA00 NO ASM
/1_DBL+
RV7 AVR-M1608C080MTAAB NO ASM
L9 PLP3216S
R363 NO ASM
L34 MMZ1608D121BTA00
2_CLK-
RV10 AVR-M1608C080MTAAB NO ASM
L33 MMZ1608D121BTA00
2_CLK+
RV9 AVR-M1608C080MTAAB NO ASM
S2_DATA0+
R366 100 NO ASM
S2_DATA0-
L10 PLP3216S
L36 MMZ1608D121BTA00 NO ASM
2_DATA0-
RV12 AVR-M1608C080MTAAB NO ASM
L35 MMZ1608D121BTA00 NO ASM
2_DATA0+
RV11 AVR-M1608C080MTAAB NO ASM
L11 PLP3216S
S2_DATA1+
R369 100 NO ASM
S2_DATA1-
L38 MMZ1608D121BTA00 NO ASM
2_DATA1-
RV14 AVR-M1608C080MTAAB NO ASM
L37 MMZ1608D121BTA00 NO ASM
2_DATA1+
RV13 AVR-M1608C080MTAAB NO ASM
S/2_DBL+
R372 100 NO ASM
S/2_DBL-
L12 PLP3216S
L40 MMZ1608D121BTA00 NO ASM
/2_DBL-
RV16 AVR-M1608C080MTAAB NO ASM
L39 MMZ1608D121BTA00 NO ASM
/2_DBL+
RV15 AVR-M1608C080MTAAB NO ASM
SLCDD01
L13 PLP3216S
LCDD01
SLCDD00
LCDD00
SLCDD11
L14 PLP3216S
LCDD11
SLCDD10
LCDD10
SLCDD21
L15 PLP3216S
LCDD21
SLCDD20
LCDD20
SLCDD31
L16 PLP3216S
LCDD31
SLCDD30
LCDD30
SFRAME_P
L18 PLP3216S
FRAME_P
SFRAME_M
FRAME_M
SM_P
L17 PLP3216S
M_P
SM_M
M_M
SLP_P
L19 PLP3216S
LP_P
SLP_M
LP_M
SCP_P
L20 PLP3216S
CP_P
SCP_M
CP_M
3.3V
R215 10K
R217 10K
R200 2.2K
IC38
TD62503F
TXD2
DTR2
RXD2
DSR2
DTR2
TXD2
RXD2
DSR2
VCC
C186
0.1uF

[SIO]

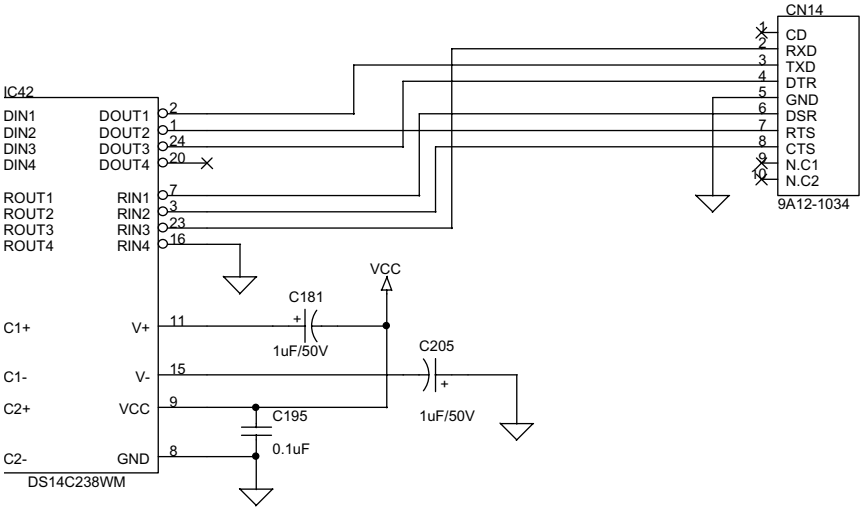
[RIC I/F (SIO #5)]



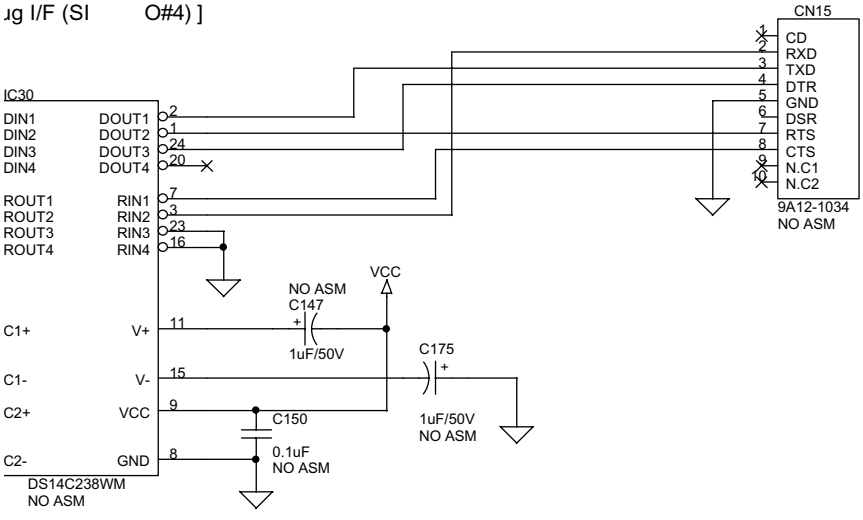
[Debug I/F (SI O#4)]



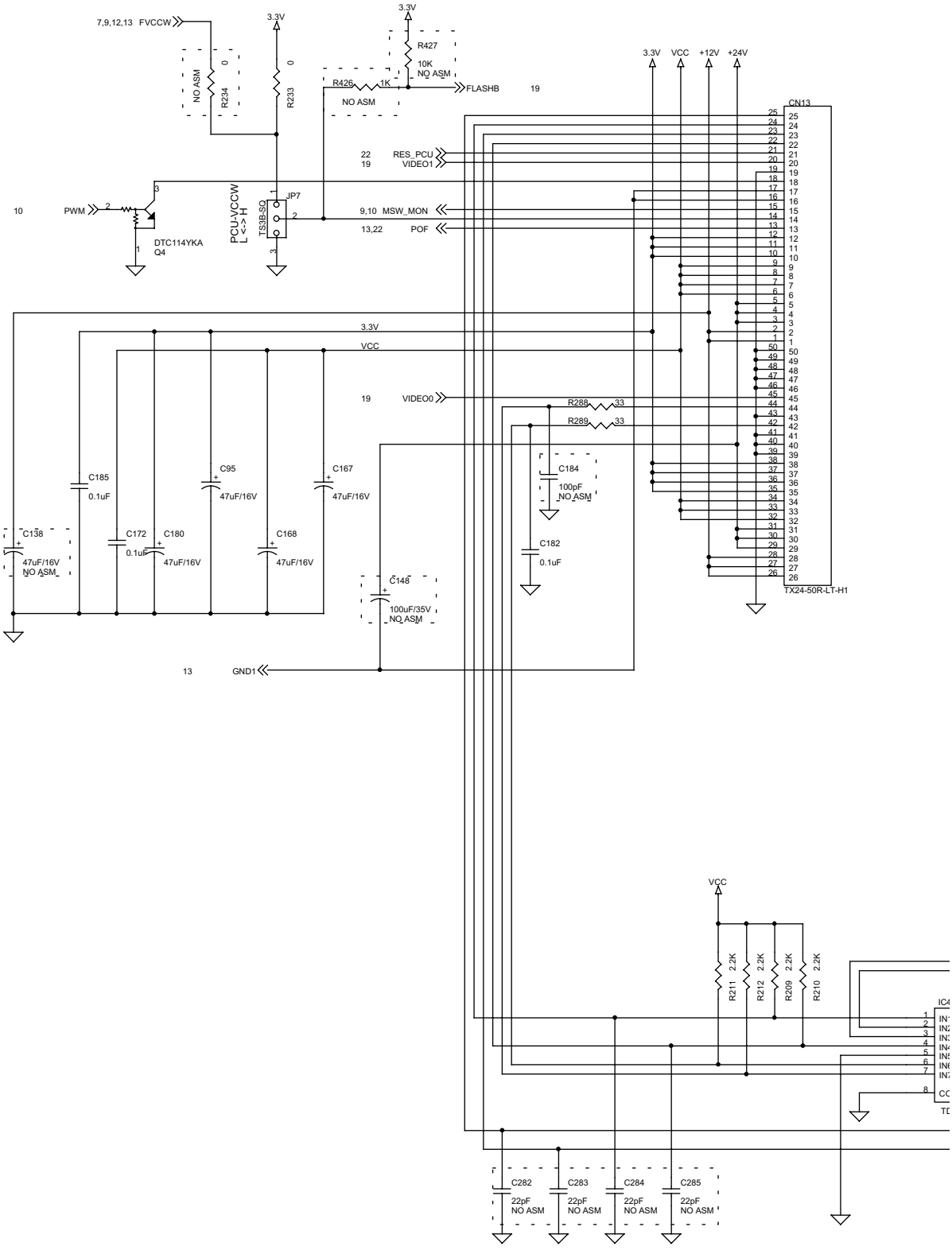
C I/F (SIO #5)]

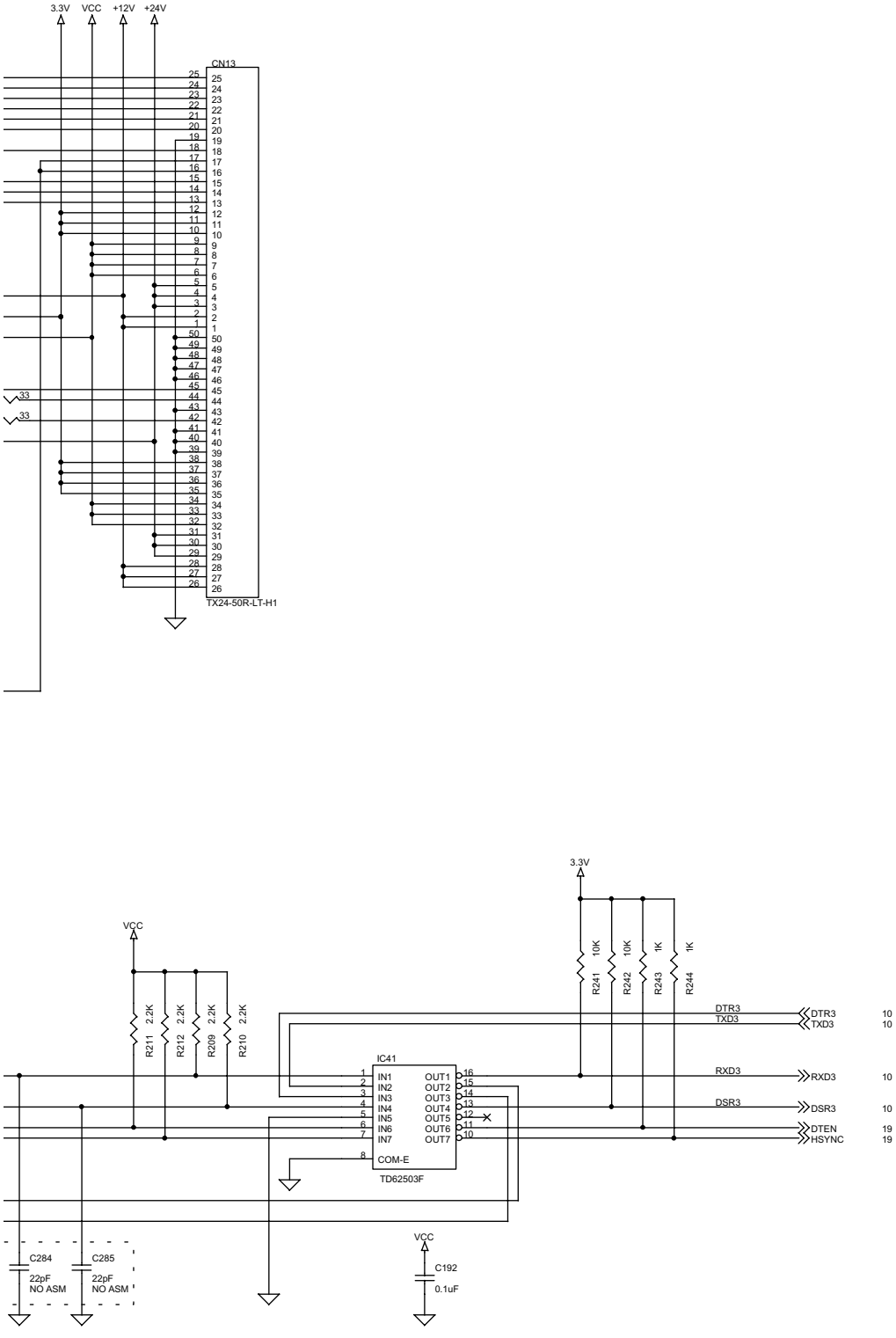


ug I/F (SI O#4)]

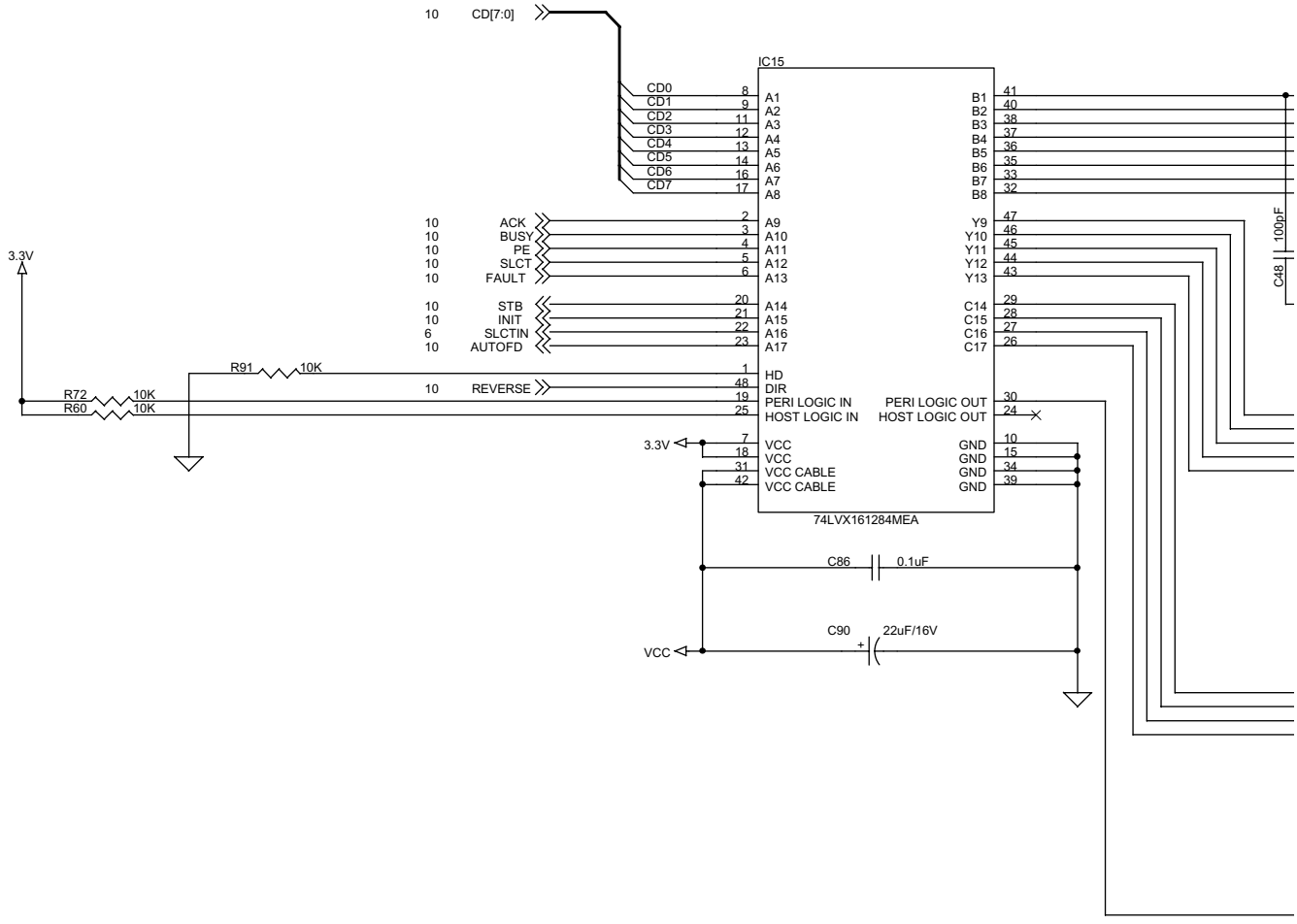


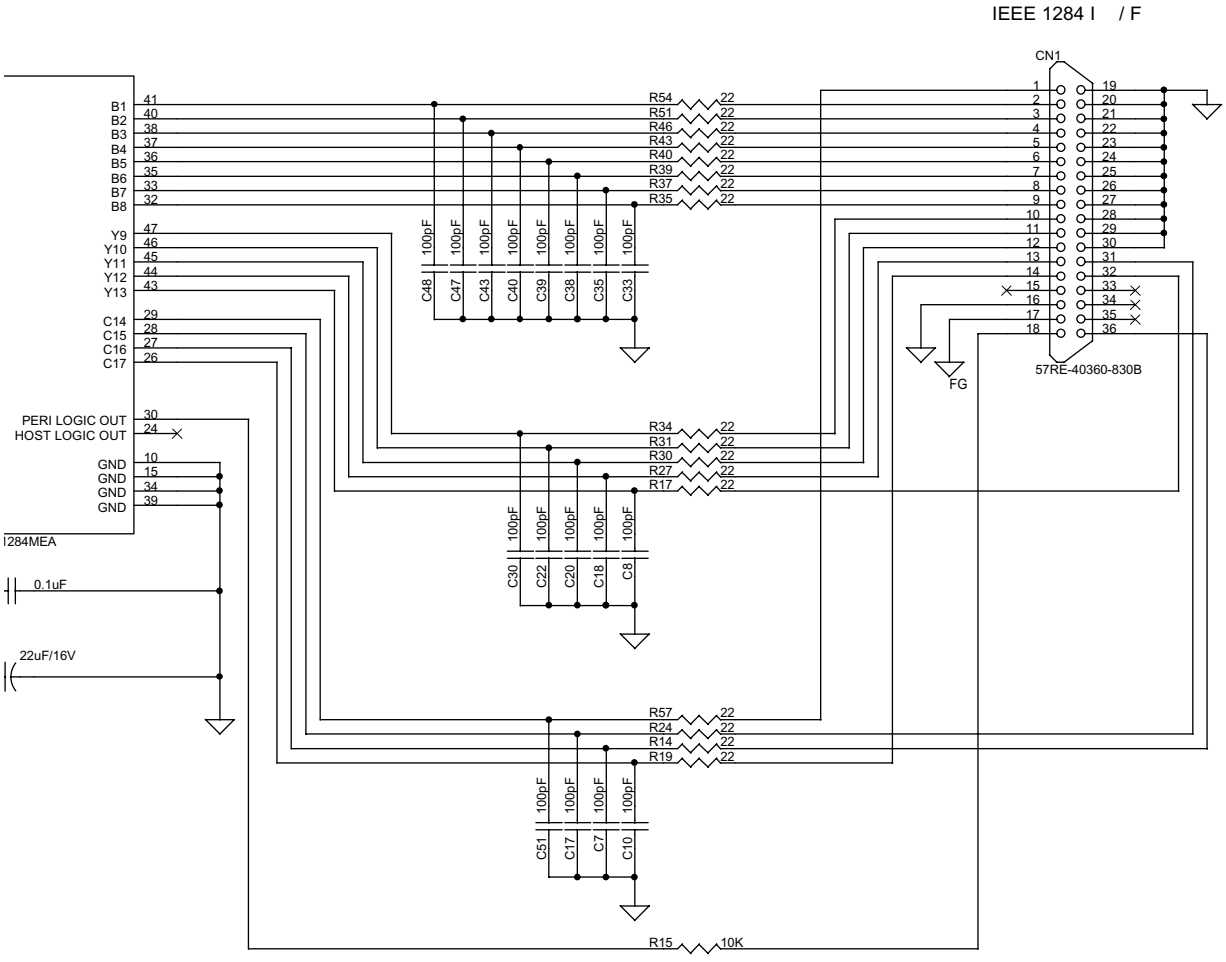
[ENGINE I/F CN]


7,9,12,13 FVCCW
3.3V
NO ASM
R234
0
R233
0
R426
1K
NO ASM
R427
10K
NO ASM
FLASHB
19
3.3V VCC +12V +24V
CN13
22 RES_PCU
19 VIDEO1
10 PWM
DTC114YKA
Q4
PCU-VCCW
L <-> H
TS3B-SQ
JP7
9,10 MSW_MON
13,22 POF
3.3V
VCC
19 VIDEO0
R288 33
R289 33
C185 0.1uF
C95 47uF/16V
C167 47uF/16V
C138 47uF/16V NO ASM
C172 0.1uF
C180 47uF/16V
C168 47uF/16V
C148 100uF/35V NO ASM
C184 100pF NO ASM
C182 0.1uF
TX24-50R-LT-H1
13 GND1
VCC
R211 2.2K
R212 2.2K
R209 2.2K
R210 2.2K
C282 22pF NO ASM
C283 22pF NO ASM
C284 22pF NO ASM
C285 22pF NO ASM

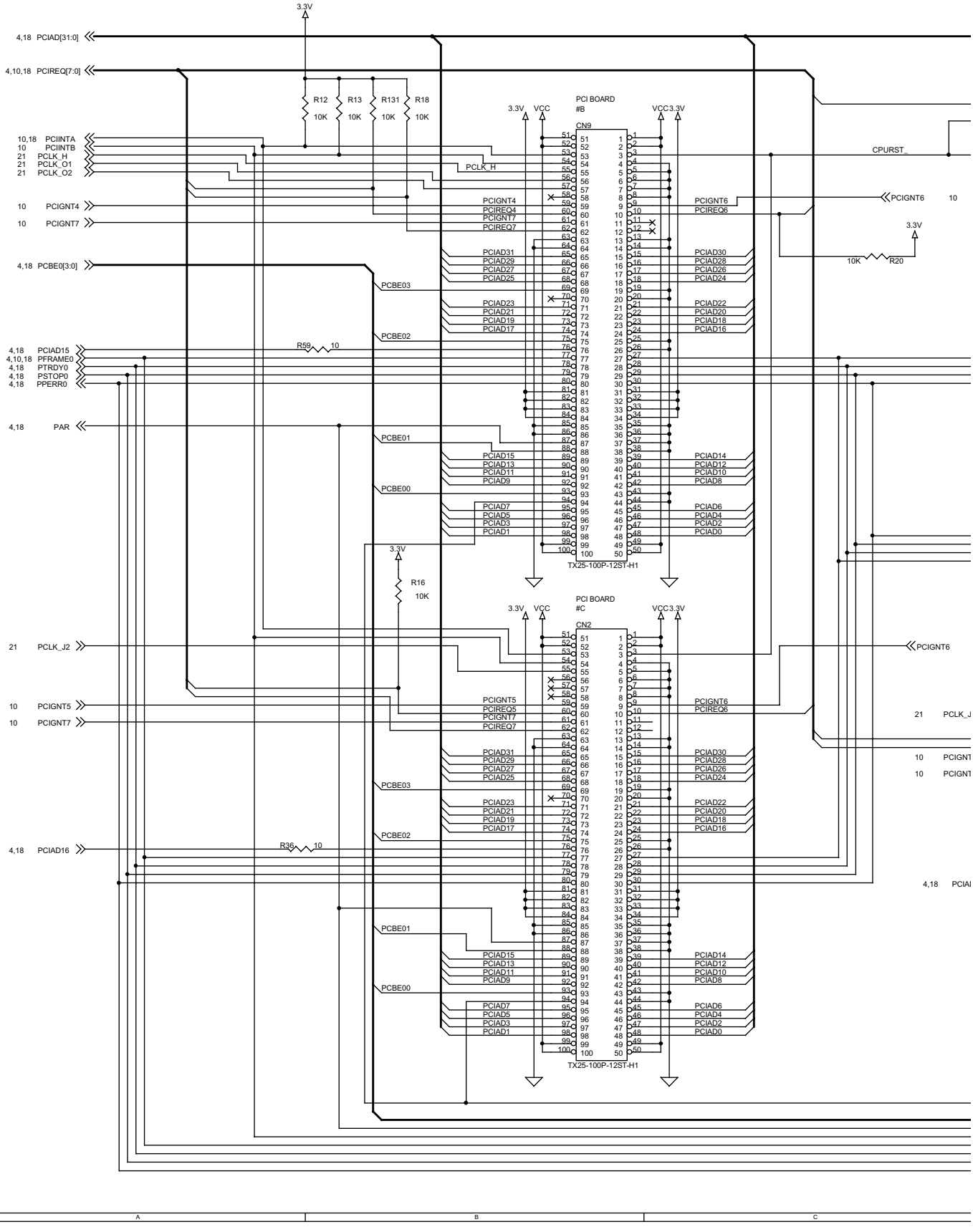

3.3V
VCC
+12V
+24V
CN13
TX24-50R-LT-H1
33
33
3.3V
VCC
R241 10K
R242 10K
R243 1K
R244 1K
R211 2.2K
R212 2.2K
R209 2.2K
R210 2.2K
IC41
IN1
IN2
IN3
IN4
IN5
IN6
IN7
COM-E
OUT1
OUT2
OUT3
OUT4
OUT5
OUT6
OUT7
TD62503F
DTR3
TXD3
RXD3
DSR3
DTEN
HSYNC
DTR3 10
TXD3 10
RXD3 10
DSR3 10
19
19
C284 22pF NO ASM
C285 22pF NO ASM
VCC
C192 0.1uF

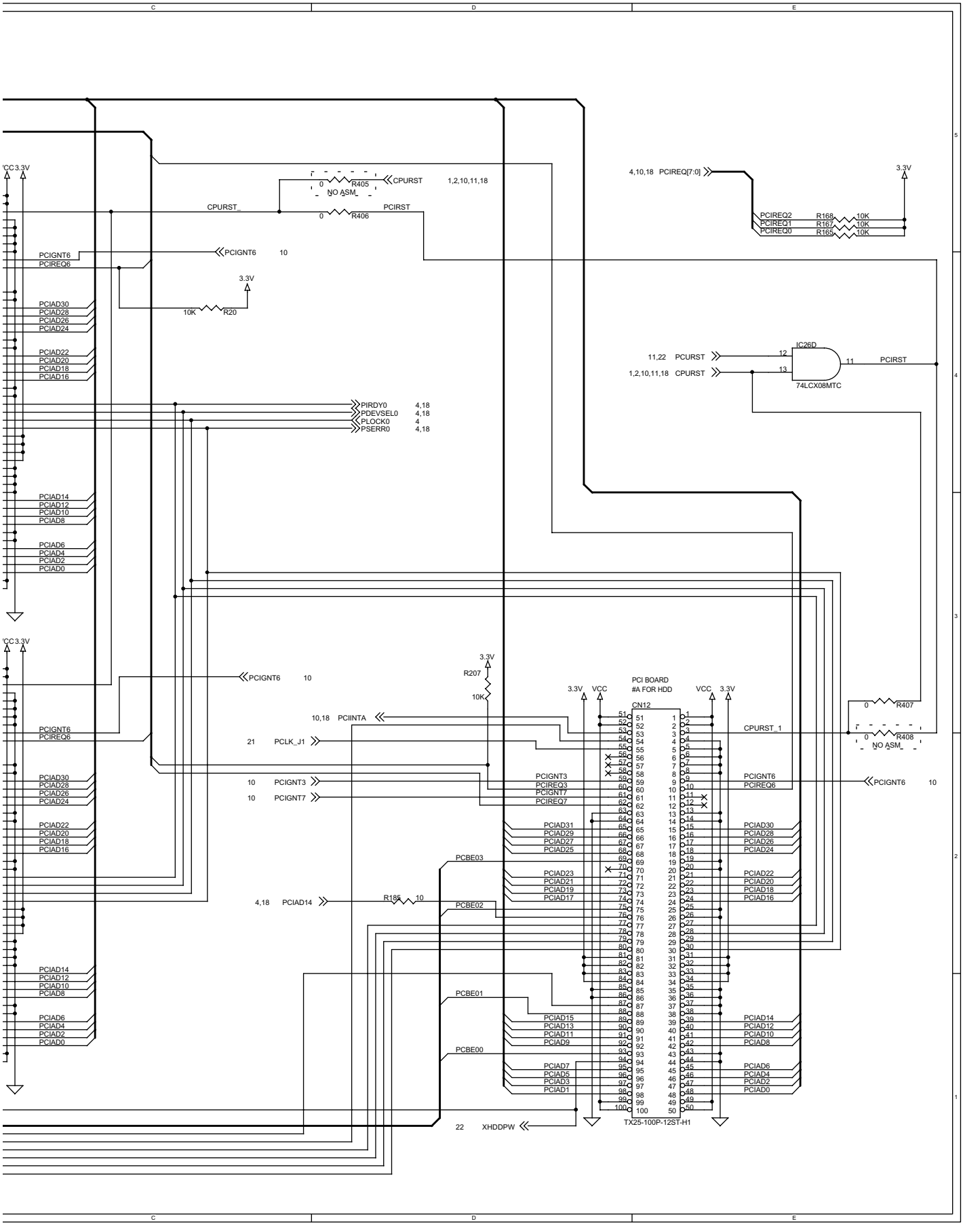
[IEEE1284 I/F]

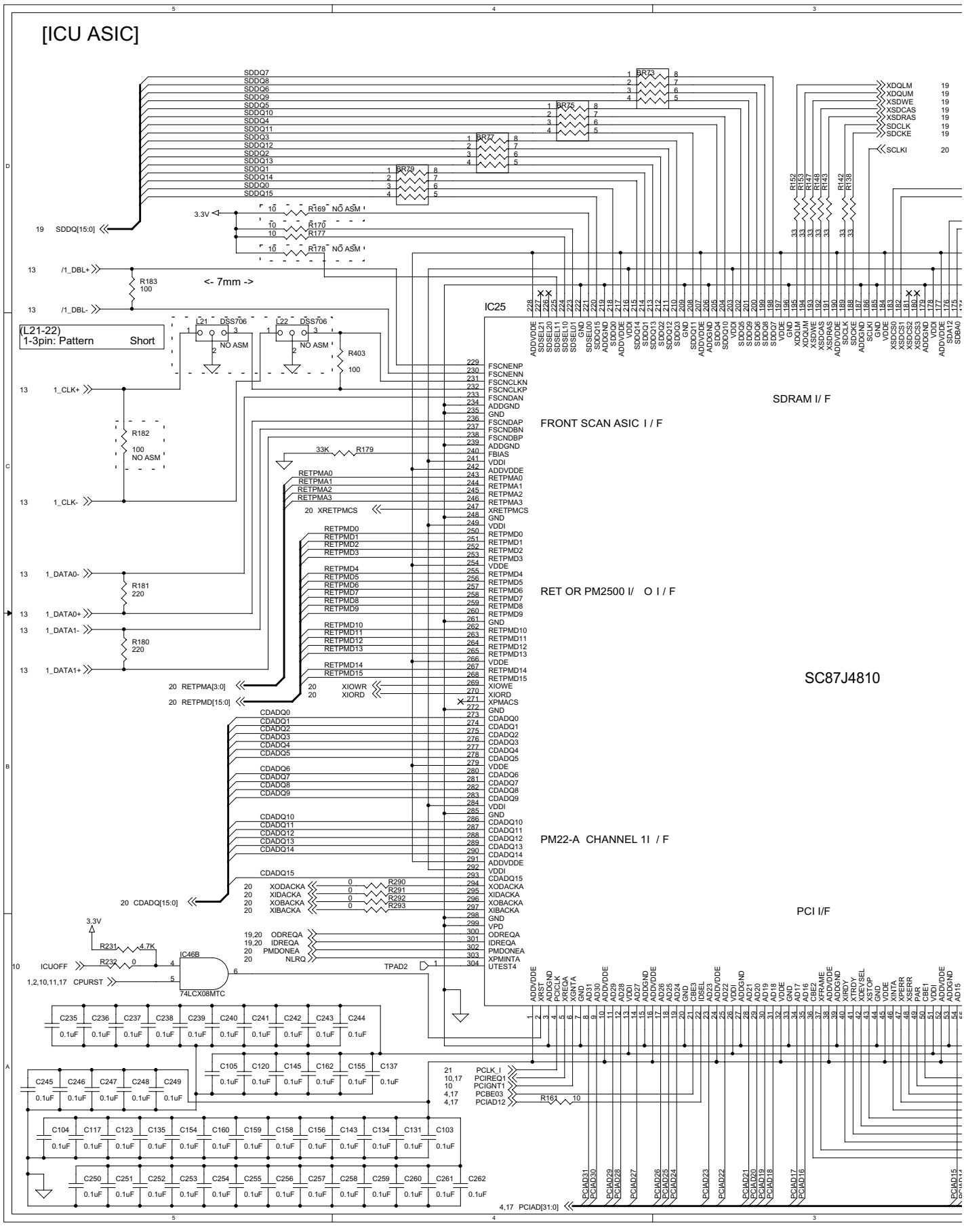

10 CD[7:0]
IC15
CD0 8 A1
CD1 9 A2
CD2 11 A3
CD3 12 A4
CD4 13 A5
CD5 14 A6
CD6 16 A7
CD7 17 A8
B1 41
B2 40
B3 38
B4 37
B5 36
B6 35
B7 33
B8 32
10 ACK 2 A9
10 BUSY 3 A10
10 PE 4 A11
10 SLCT 5 A12
10 FAULT 6 A13
Y9 47
Y10 46
Y11 45
Y12 44
Y13 43
C48 100pF
10 STB 20 A14
10 INIT 21 A15
6 SLCTIN 22 A16
10 AUTOFD 23 A17
C14 29
C15 28
C16 27
C17 26
3.3V
R91 10K
1 HD
10 REVERSE 48 DIR
R72 10K
R60 10K
19 PERI LOGIC IN
25 HOST LOGIC IN
PERI LOGIC OUT 30
HOST LOGIC OUT 24
3.3V
7 VCC
18 VCC
31 VCC CABLE
42 VCC CABLE
GND 10
GND 15
GND 34
GND 39
74LVX161284MEA
C86 0.1uF
C90 22uF/16V
VCC

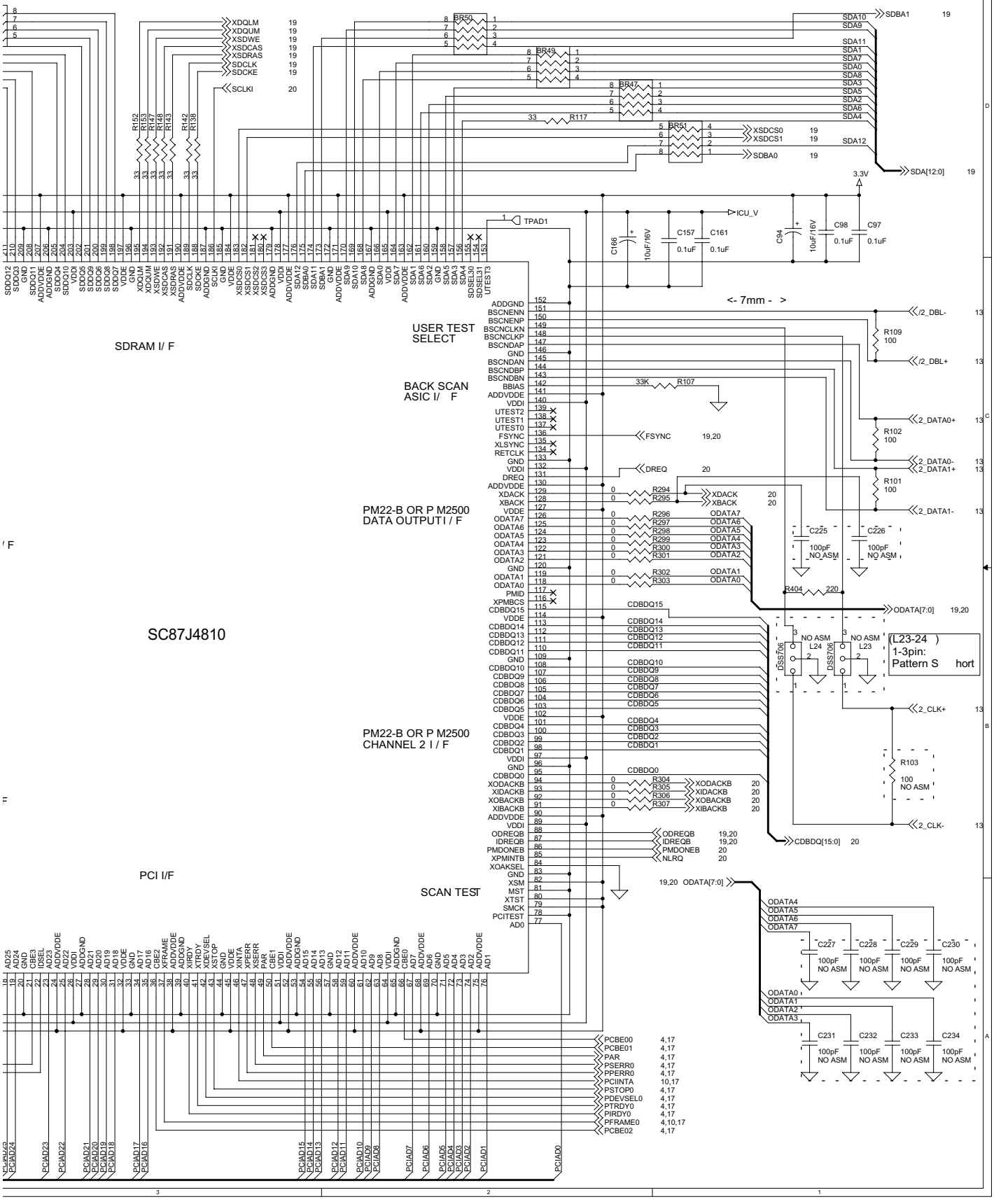

IEEE 1284 I / F
CN1
57RE-40360-830B
FG
B1 41
B2 40
B3 38
B4 37
B5 36
B6 35
B7 33
B8 32
Y9 47
Y10 46
Y11 45
Y12 44
Y13 43
C14 29
C15 28
C16 27
C17 26
PERI LOGIC OUT 30
HOST LOGIC OUT 24
GND 10
GND 15
GND 34
GND 39
I284MEA
0.1uF
22uF/16V
R54 22
R51 22
R46 22
R43 22
R40 22
R39 22
R37 22
R35 22
100pF C48
100pF C47
100pF C43
100pF C40
100pF C39
100pF C38
100pF C35
100pF C33
R34 22
R31 22
R30 22
R27 22
R17 22
100pF C30
100pF C22
100pF C20
100pF C18
100pF C8
R57 22
R24 22
R14 22
R19 22
100pF C51
100pF C17
100pF C7
100pF C10
R15 10K

[PCI BOARD CONNECTOR]

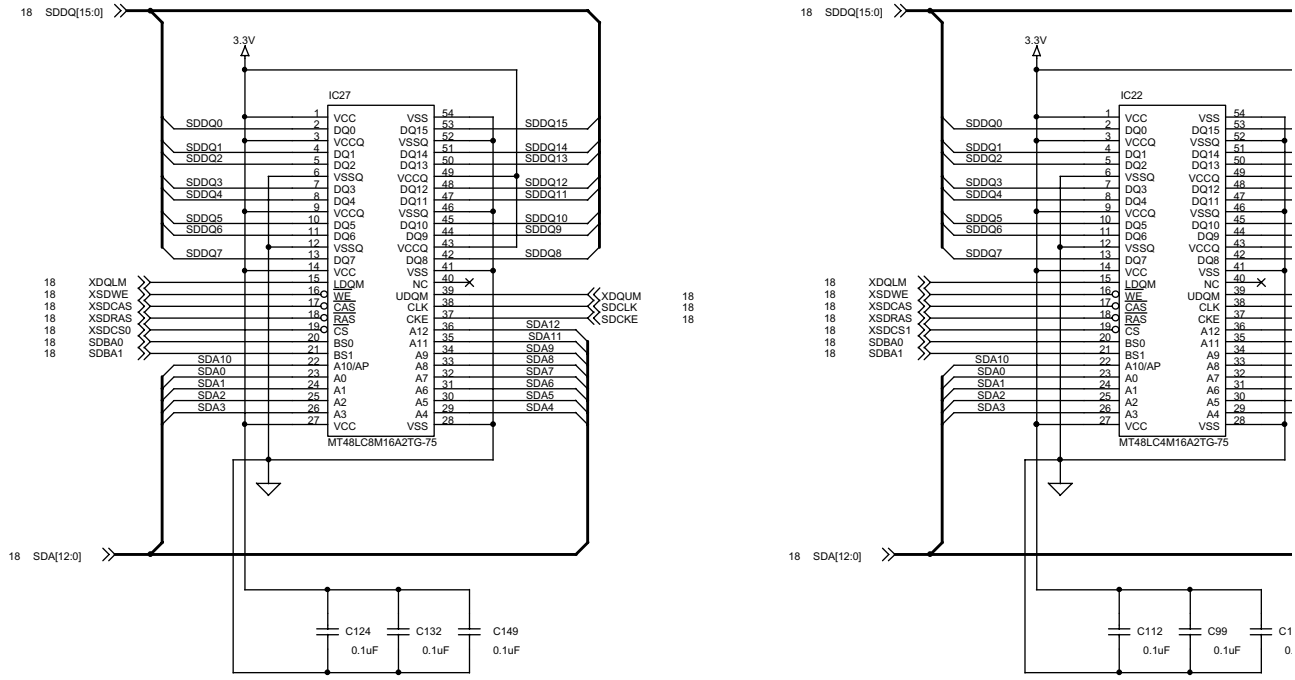


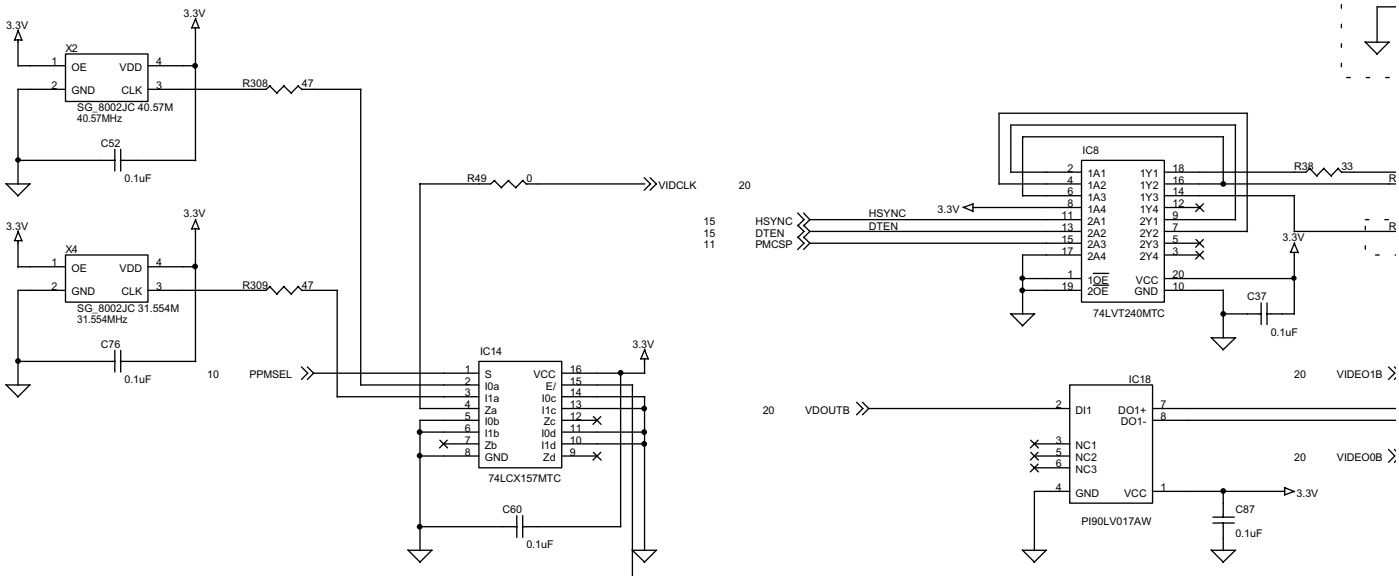

'CC 3.3V
R405
0
NO ASM
CPURST
1,2,10,11,18
CPURST_
R406
PCIRST
PCIGNT6
PCIREQ6
10
3.3V
10K
R20
PCIAD30
PCIAD28
PCIAD26
PCIAD24
PCIAD22
PCIAD20
PCIAD18
PCIAD16
PIRDY0
PDEVSEL0
PLOCK0
PSERR0
4,18
4
PCIAD14
PCIAD12
PCIAD10
PCIAD8
PCIAD6
PCIAD4
PCIAD2
PCIAD0
4,10,18 PCIREQ[7:0]
PCIREQ2
PCIREQ1
PCIREQ0
R168
R167
R165
10K
IC26D
11,22 PCURST
1,2,10,11,18 CPURST
74LCX08MTC
R207
10K
10,18 PCIINTA
21 PCLK_J1
10 PCIGNT3
10 PCIGNT7
PCIREQ3
PCIREQ7
PCI BOARD
#A FOR HDD
VCC
CN12
CPURST_1
R407
R408
PCBE03
PCBE02
PCBE01
PCBE00
4,18 PCIAD14
R185
22 XHDDPW
TX25-100P-12ST-H1

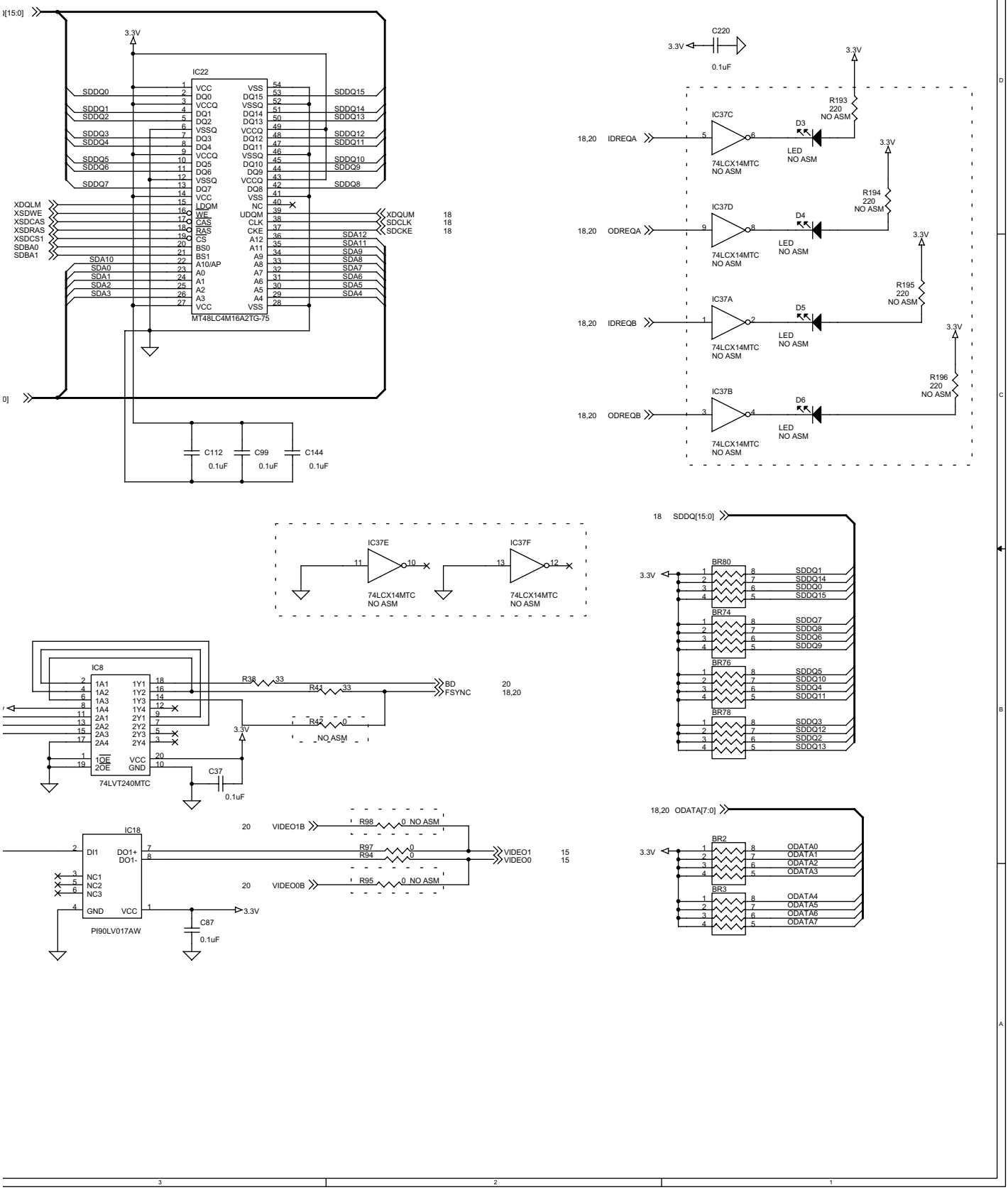

[ICU ASIC]
IC25
SC87J4810
SDRAM I/ F
FRONT SCAN ASIC I / F
RET OR PM2500 I/ O I / F
PM22-A CHANNEL 1I / F
PCI I/F
SDDQ[15:0]
XDQLM
XDQUM
XSDWE
XSDCAS
XSDRAS
SDCLK
SDCKE
SCLKI
R169 NO ASM
R170
R177
R178 NO ASM
/1_DBL+
/1_DBL-
R183
100
<- 7mm ->
(L21-22)
1-3pin: Pattern Short
L21 DSS706
L22 DSS706
NO ASM
R403
1_CLK+
1_CLK-
R182
100
NO ASM
1_DATA0-
1_DATA0+
1_DATA1-
1_DATA1+
R181
220
R180
220
33K R179
RETPMA[3:0]
RETPMD[15:0]
XRETPMCS
XIOWR
XIORD
CDADQ[15:0]
XODACKA
XIDACKA
XOBACKA
XIBACKA
R290
R291
R292
R293
ODREQA
IDREQA
PMDONEA
NLRQ
TPAD2
ICUOFF
CPURST
IC46B
74LCX08MTC
R231 4.7K
R232 0
PCLK_I
PCIREQ1
PCIGNT1
PCBE03
PCIAD12
R161 10
PCIAD[31:0]
C235 C236 C237 C238 C239 C240 C241 C242 C243 C244
C105 C120 C145 C162 C155 C137
C245 C246 C247 C248 C249
C104 C117 C123 C135 C154 C160 C159 C158 C156 C143 C134 C131 C103
C250 C251 C252 C253 C254 C255 C256 C257 C258 C259 C260 C261 C262
0.1uF

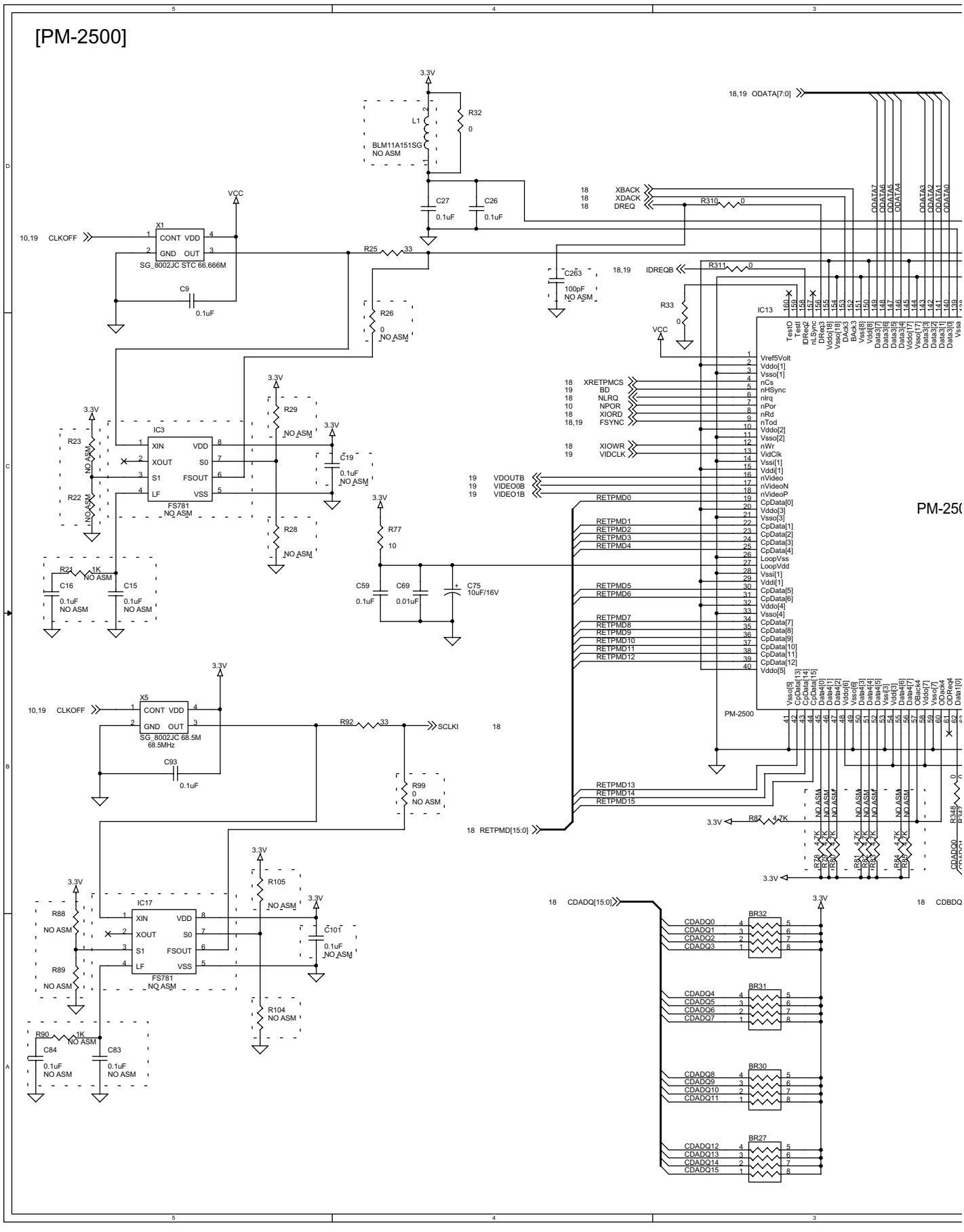

SDRAM I/ F
USER TEST SELECT
BACK SCAN ASIC I/ F
PM22-B OR P M2500 DATA OUTPUTI / F
SC87J4810
PM22-B OR P M2500 CHANNEL 2 I / F
PCI I/F
SCAN TEST
<- 7mm - >
(L23-24)
1-3pin:
Pattern S hort
NO ASM
100pF
0.1uF
10uF/16V
33K
220
100

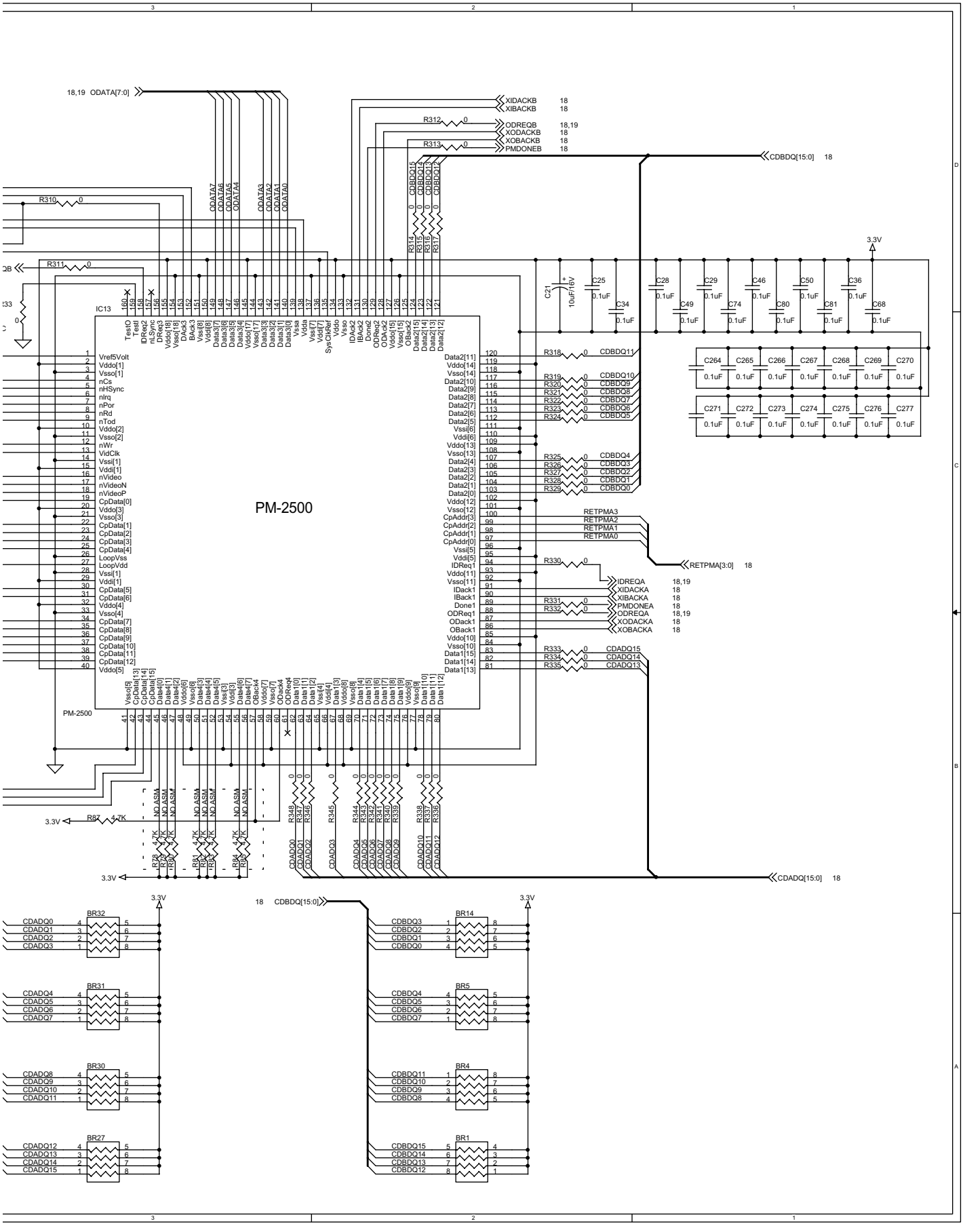
[ICU SDRAM]


18 SDDQ[15:0]
3.3V
IC27
SDDQ0
SDDQ1
SDDQ2
SDDQ3
SDDQ4
SDDQ5
SDDQ6
SDDQ7
SDDQ15
SDDQ14
SDDQ13
SDDQ12
SDDQ11
SDDQ10
SDDQ9
SDDQ8
18 XDQLM
18 XSDWE
18 XSDCAS
18 XSDRAS
18 XSDCS0
18 SDBA0
18 SDBA1
XDQUM 18
SDCLK 18
SDCKE 18
SDA12
SDA11
SDA9
SDA8
SDA7
SDA6
SDA5
SDA4
SDA10
SDA0
SDA1
SDA2
SDA3
MT48LC8M16A2TG-75
18 SDA[12:0]
C124 0.1uF
C132 0.1uF
C149 0.1uF
18 SDDQ[15:0]
3.3V
IC22
MT48LC4M16A2TG-75
18 SDA[12:0]
C112 0.1uF
C99 0.1uF

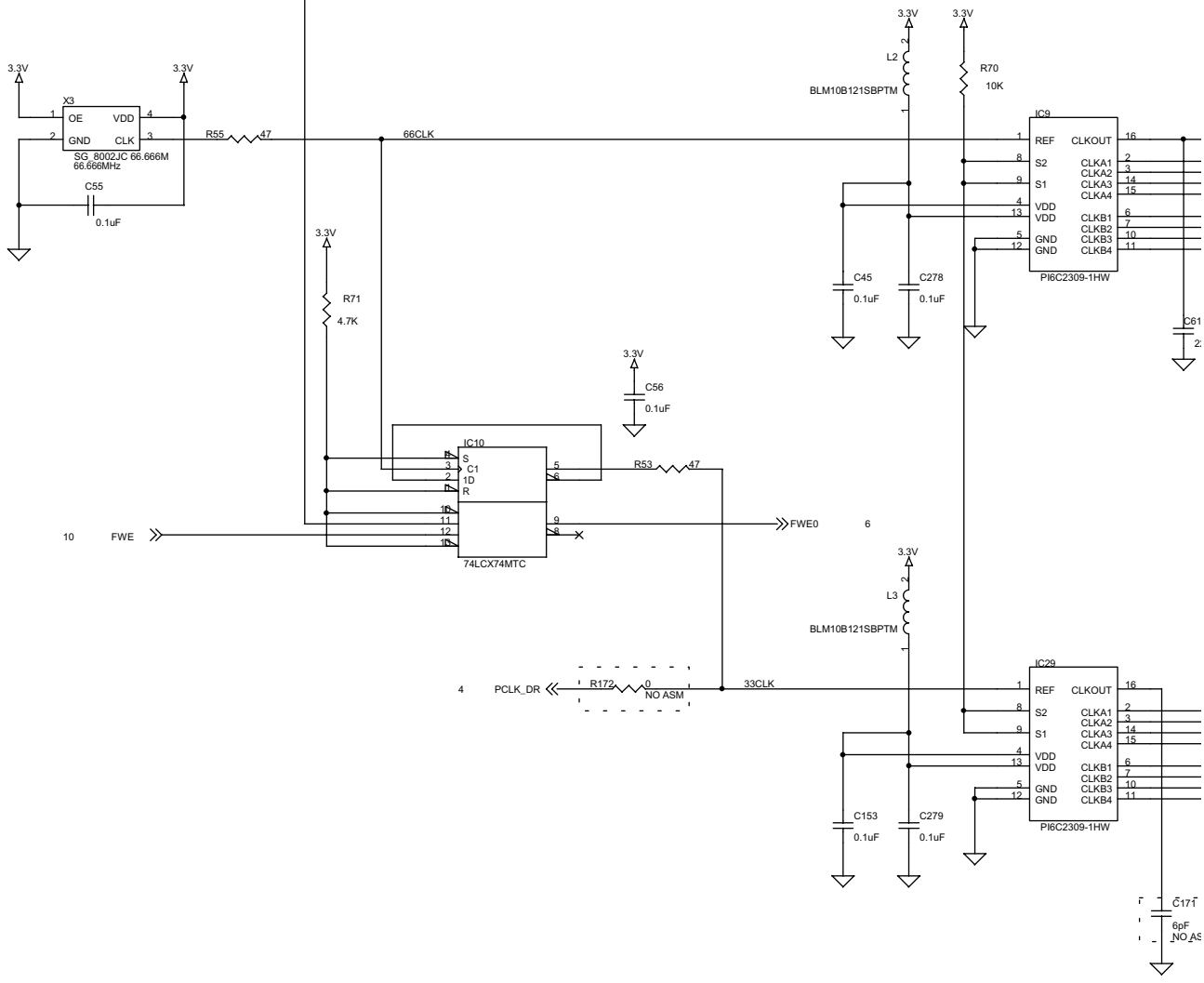

3.3V
X2
SG_8002JC 40.57M
40.57MHz
R308 47
C52 0.1uF
X4
SG_8002JC 31.554M
31.554MHz
R309 47
C76 0.1uF
10 PPMSEL
R49 0
VIDCLK 20
IC14
74LCX157MTC
C60 0.1uF
IC43F
10,20 CLKOFF
74LCX14MTC
IC11D
7 FLASHA
15 FLASHB
74LCX32MTC
13 FLASHC
IC11B
74LCX32MTC
FLASHO 10
0.1uF C58
IC8
74LVT240MTC
C37 0.1uF
15 HSYNC
15 DTEN
11 PMCSP
R38 33
IC18
PI90LV017AW
C87 0.1uF
20 VDOUTB
20 VIDEO1B
20 VIDEO0B

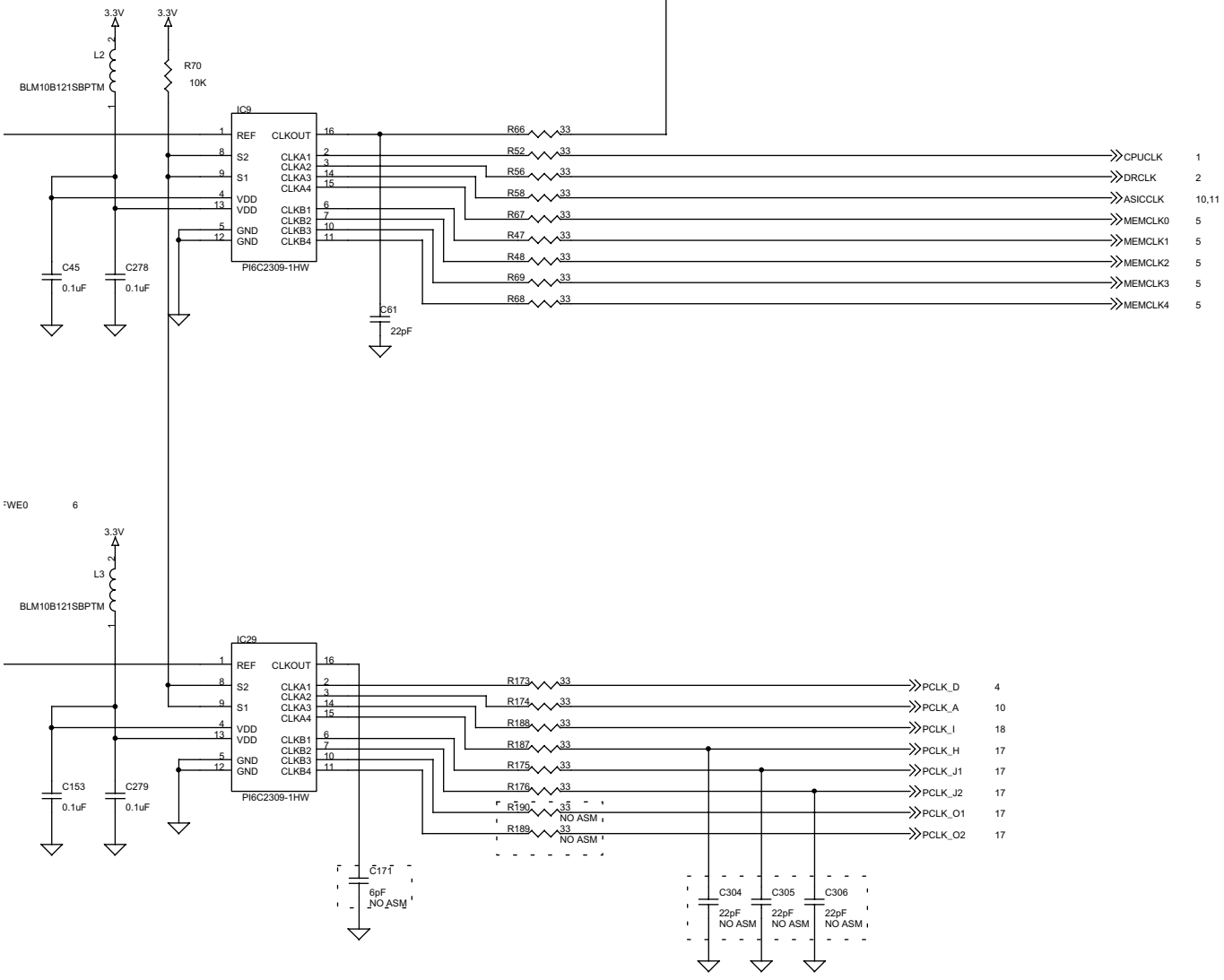

IC22
MT48LC4M16A2TG-75
SDDQ0
SDDQ1
SDDQ2
SDDQ3
SDDQ4
SDDQ5
SDDQ6
SDDQ7
SDDQ15
SDDQ14
SDDQ13
SDDQ12
SDDQ11
SDDQ10
SDDQ9
SDDQ8
XDQLM
XSDWE
XSDCAS
XSDRAS
XSDCS1
SDBA0
SDBA1
SDA10
SDA0
SDA1
SDA2
SDA3
SDA12
SDA11
SDA9
SDA8
SDA7
SDA6
SDA5
SDA4
XDQUM
SDCLK
SDCKE
C112
C99
C144
0.1uF
C220
IC37C
IC37D
IC37A
IC37B
74LCX14MTC
NO ASM
D3
D4
D5
D6
LED
R193
R194
R195
R196
220
IDREQA
ODREQA
IDREQB
ODREQB
IC37E
IC37F
IC8
74LVT240MTC
C37
R38
R41
R42
BD
FSYNC
IC18
PI90LV017AW
C87
VIDEO1B
VIDEO0B
R98
R97
R94
R95
VIDEO1
VIDEO0
SDDQ[15:0]
BR80
BR74
BR76
BR78
ODATA[7:0]
BR2
BR3
ODATA0
ODATA1
ODATA2
ODATA3
ODATA4
ODATA5
ODATA6
ODATA7


[PM-2500]
3.3V
L1
BLM11A151SG
NO ASM
R32
0
C27
0.1uF
C26
0.1uF
VCC
X1
CONT VDD
GND OUT
SG_8002JC STC 66.666M
10,19 CLKOFF
C9
0.1uF
R25 33
R26
0
NO ASM
18 XBACK
18 XDACK
18 DREQ
R310 0
C263
100pF
NO ASM
18,19 IDREQB
R311 0
R33
0
IC13
18,19 ODATA[7:0]
ODATA7
ODATA6
ODATA5
ODATA4
ODATA3
ODATA2
ODATA1
ODATA0
TestO
TestI
IDReq2
nIA Sync
DRes3
Vdd0[18]
Vss0[18]
DAck3
BAck3
Vss0[8]
Vdd0[8]
Data3[7]
Data3[6]
Data3[5]
Data3[4]
Vdd0[17]
Vss0[17]
Data3[3]
Data3[2]
Data3[1]
Data3[0]
Vssa
Vref5Volt
Vddo[1]
Vsso[1]
nCs
nHSync
nIrq
nPor
nRd
nTod
Vddo[2]
Vsso[2]
nWr
VidClk
Vssi[1]
Vddi[1]
nVideo
nVideoN
nVideoP
CpData[0]
Vddo[3]
Vsso[3]
CpData[1]
CpData[2]
CpData[3]
CpData[4]
LoopVss
LoopVdd
Vssi[1]
Vddi[1]
CpData[5]
CpData[6]
Vddo[4]
Vsso[4]
CpData[7]
CpData[8]
CpData[9]
CpData[10]
CpData[11]
CpData[12]
Vddo[5]
PM-2500
18 XRETPMCS
19 BD
18 NLRQ
10 NPOR
18 XIORD
18,19 FSYNC
18 XIOWR
19 VIDCLK
19 VDOUTB
19 VIDEO0B
19 VIDEO1B
RETPMD0
RETPMD1
RETPMD2
RETPMD3
RETPMD4
RETPMD5
RETPMD6
RETPMD7
RETPMD8
RETPMD9
RETPMD10
RETPMD11
RETPMD12
RETPMD13
RETPMD14
RETPMD15
18 RETPMD[15:0]
IC3
XIN
XOUT
S1
LF
VDD
S0
FSOUT
VSS
FS781
NO ASM
R23
R22
R24 1K
C16
C15
0.1uF
R29
R28
C19
0.1uF
R77
10
C59
0.1uF
C69
0.01uF
C75
10uF/16V
X5
SG_8002JC 68.5M
68.5MHz
C93
0.1uF
R92 33
SCLKI
18
R99
0
NO ASM
R87 4.7K
IC17
R88
R89
R105
R104
C101
0.1uF
R90 1K
C84
C83
18 CDADQ[15:0]
18 CDBDQ
BR32
BR31
BR30
BR27
CDADQ0
CDADQ1
CDADQ2
CDADQ3
CDADQ4
CDADQ5
CDADQ6
CDADQ7
CDADQ8
CDADQ9
CDADQ10
CDADQ11
CDADQ12
CDADQ13
CDADQ14
CDADQ15

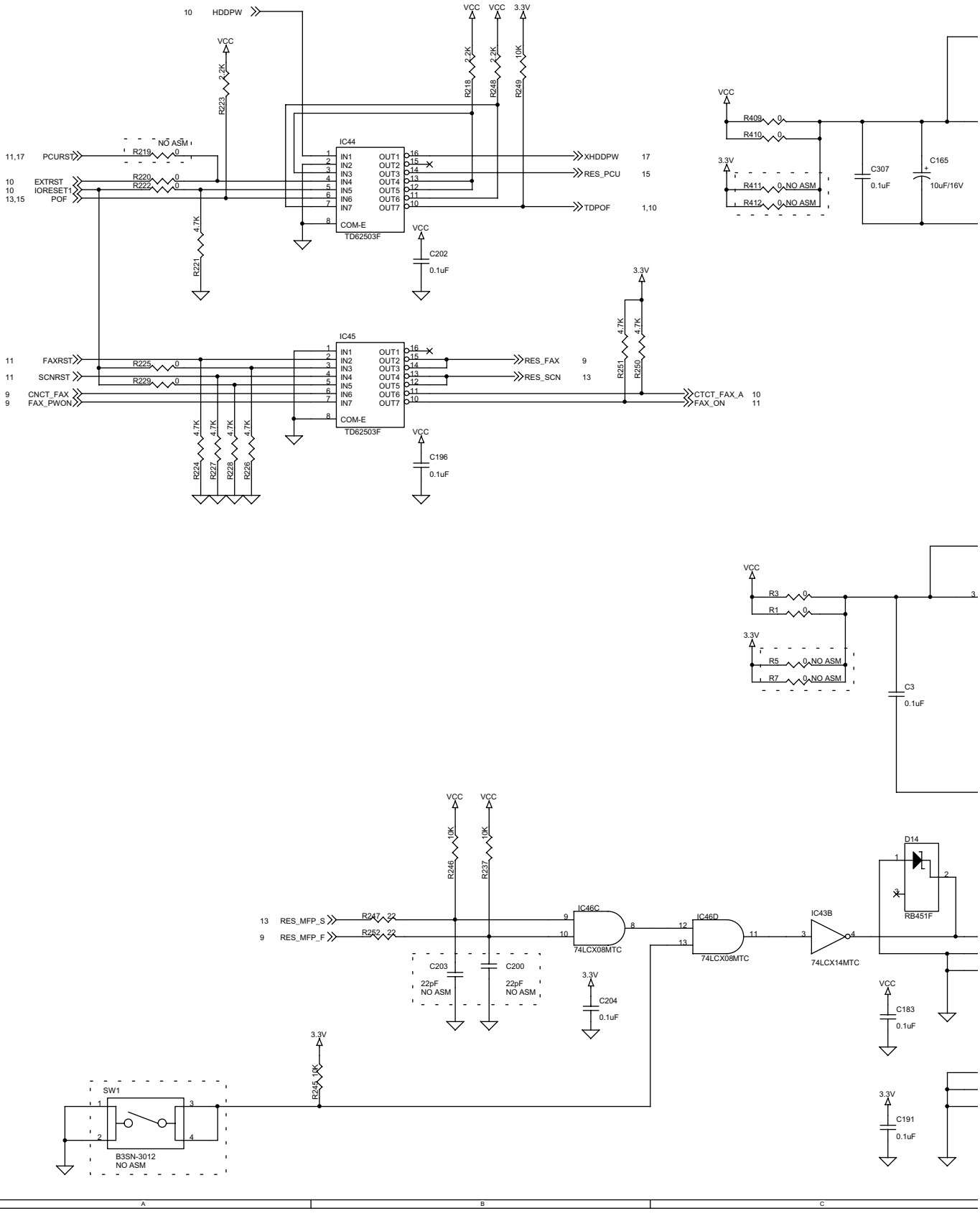

PM-2500
IC13
18,19 ODATA[7:0]
CDBDQ[15:0] 18
CDADQ[15:0] 18
RETPMA[3:0] 18
3.3V
XIDACKB 18
XIBACKB 18
ODREQB 18,19
XODACKB 18
XOBACKB 18
PMDONEB 18
IDREQA 18,19
XIDACKA 18
XIBACKA 18
PMDONEA 18
ODREQA 18,19
XODACKA 18
XOBACKA 18
BR32
BR31
BR30
BR27
BR14
BR5
BR4
BR1

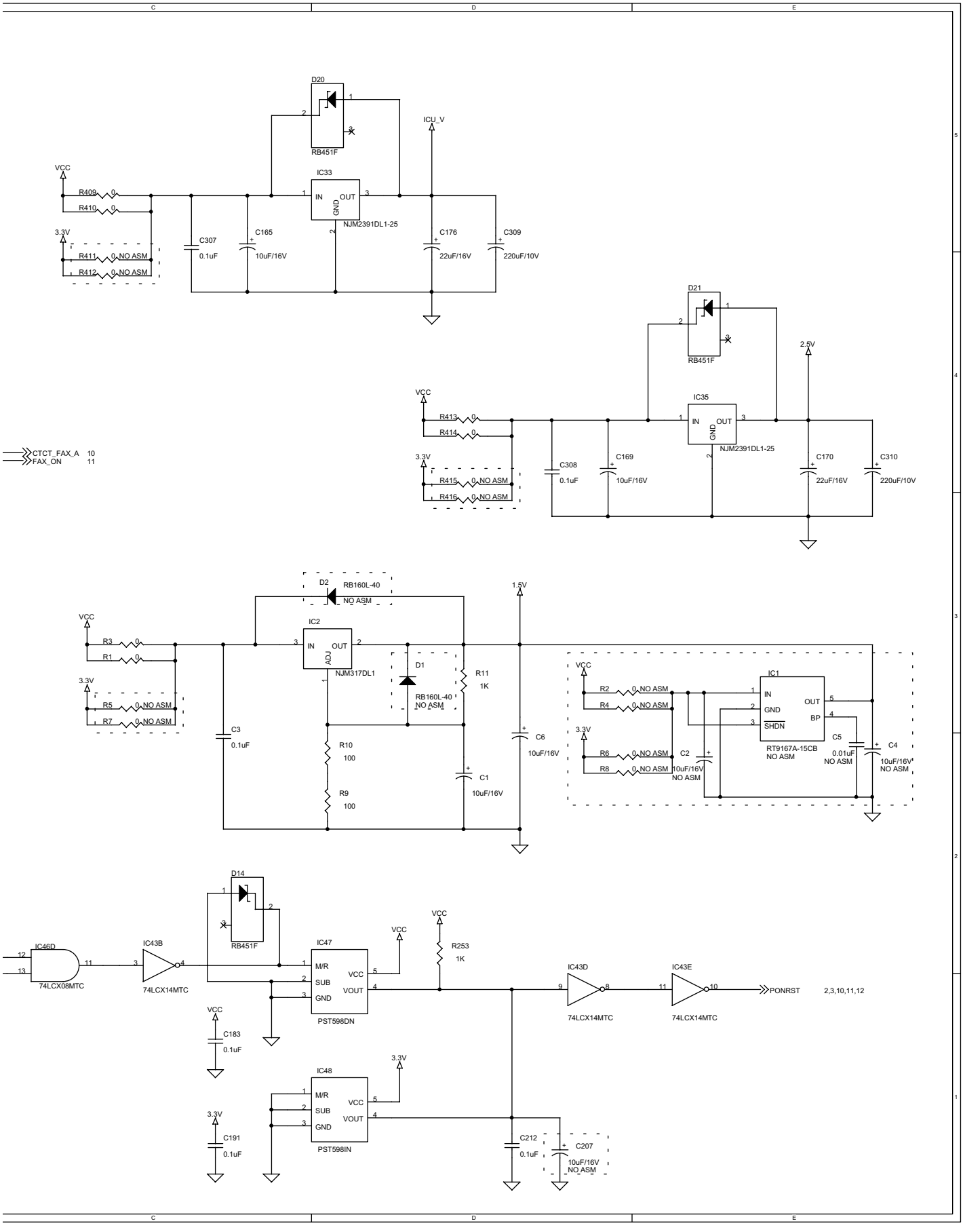
[CLOCK]


3.3V
X3
OE
VDD
GND
CLK
SG_8002JC 66.666M
66.666MHz
C55
0.1uF
R55
47
66CLK
L2
BLM10B121SBPTM
R70
10K
IC9
REF
CLKOUT
S2
S1
VDD
GND
CLKA1
CLKA2
CLKA3
CLKA4
CLKB1
CLKB2
CLKB3
CLKB4
PI6C2309-1HW
C45
C278
C61
R71
4.7K
C56
IC10
S
C1
1D
R
74LCX74MTC
R53
FWE
FWE0
L3
PCLK_DR
R172
NO ASM
33CLK
C153
C279
C171
6pF


3.3V
3.3V
L2
BLM10B121SBPTM
R70
10K
IC9
REF
S2
S1
VDD
VDD
GND
GND
CLKOUT
CLKA1
CLKA2
CLKA3
CLKA4
CLKB1
CLKB2
CLKB3
CLKB4
PI6C2309-1HW
C45
0.1uF
C278
0.1uF
C61
22pF
R66 33
R52 33
R56 33
R58 33
R67 33
R47 33
R48 33
R69 33
R68 33
CPUCLK 1
DRCLK 2
ASICCLK 10,11
MEMCLK0 5
MEMCLK1 5
MEMCLK2 5
MEMCLK3 5
MEMCLK4 5
WE0 6
3.3V
L3
BLM10B121SBPTM
IC29
PI6C2309-1HW
C153
0.1uF
C279
0.1uF
C171
6pF
NO ASM
C304
22pF
NO ASM
C305
22pF
NO ASM
C306
22pF
NO ASM
R173 33
R174 33
R188 33
R187 33
R175 33
R176 33
R190 33
NO ASM
R189 33
NO ASM
PCLK_D 4
PCLK_A 10
PCLK_I 18
PCLK_H 17
PCLK_J1 17
PCLK_J2 17
PCLK_O1 17
PCLK_O2 17

[RESET / POWER]


10 HDDPW
VCC
2.2K
R223
R218
R248
R249
10K
11,17 PCURST
R219
NO ASM
10 EXTRST
10 IORESET
13,15 POF
R220
R222
4.7K
R221
IC44
IN1 IN2 IN3 IN4 IN5 IN6 IN7 COM-E
OUT1 OUT2 OUT3 OUT4 OUT5 OUT6 OUT7
TD62503F
XHDDPW 17
RES_PCU 15
TDPOF 1,10
C202
0.1uF
R409
R410
C307
C165
10uF/16V
R411
R412
11 FAXRST
11 SCNRST
9 CNCT_FAX
9 FAX_PWON
R225
R229
IC45
RES_FAX 9
RES_SCN 13
R251
R250
CTCT_FAX_A 10
FAX_ON 11
R224
R227
R228
R226
C196
R3
R1
R5
R7
C3
13 RES_MFP_S
9 RES_MFP_F
R247 22
R252 22
R246
R237
C203
C200
22pF
NO ASM
IC46C
74LCX08MTC
IC46D
74LCX08MTC
IC43B
74LCX14MTC
D14
RB451F
C204
C183
C191
SW1
B3SN-3012
NO ASM
R245


D20
RB451F
ICU_V
VCC
R409 0
R410 0
IC33
IN
OUT
GND
NJM2391DL1-25
3.3V
R411 0 NO ASM
R412 0 NO ASM
C307
0.1uF
C165
10uF/16V
C176
22uF/16V
C309
220uF/10V
D21
RB451F
2.5V
VCC
R413 0
R414 0
IC35
IN
OUT
GND
NJM2391DL1-25
3.3V
R415 0 NO ASM
R416 0 NO ASM
C308
0.1uF
C169
10uF/16V
C170
22uF/16V
C310
220uF/10V
CTCT_FAX_A 10
FAX_ON 11
D2
RB160L-40
NO ASM
1.5V
VCC
R3 0
R1 0
IC2
IN
OUT
ADJ
NJM317DL1
3.3V
R5 0 NO ASM
R7 0 NO ASM
D1
RB160L-40
NO ASM
R11
1K
C3
0.1uF
R10
100
R9
100
C1
10uF/16V
C6
10uF/16V
VCC
R2 0 NO ASM
R4 0 NO ASM
IC1
IN
GND
SHDN
OUT
BP
RT9167A-15CB
NO ASM
3.3V
R6 0 NO ASM
R8 0 NO ASM
C2
10uF/16V
NO ASM
C5
0.01uF
NO ASM
C4
10uF/16V
NO ASM
D14
RB451F
IC46D
74LCX08MTC
IC43B
74LCX14MTC
IC47
M/R
SUB
GND
VCC
VOUT
PST598DN
VCC
R253
1K
IC43D
74LCX14MTC
IC43E
74LCX14MTC
PONRST
2,3,10,11,12
VCC
C183
0.1uF
IC48
M/R
SUB
GND
VCC
VOUT
PST598IN
3.3V
C191
0.1uF
C212
0.1uF
C207
10uF/16V
NO ASM

CAUTION FOR BATTERY REPLACEMENT

(Danish) ADVARSEL !

Lithiumbatteri – Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri
af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandoren.

(English) Caution !

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type
recommended by the manufacturer.
Dispose of used batteries according to manufacturer's instructions.

(Finnish) VAROITUS

Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan
tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden
mukaisesti.

(French) ATTENTION

Il y a danger d'explosion s' il y a remplacement incorrect
de la batterie. Remplacer uniquement avec une batterie du
même type ou d'un type équivalent recommandé par
le constructeur.
Mettre au rebut les batteries usagées conformément aux
instructions du fabricant.

(Swedish) VARNING

Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent
typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens
instruktion.

(German) Achtung

Explosionsgefahr bei Verwendung inkorrekter Batterien.
Als Ersatzbatterien dürfen nur Batterien vom gleichen Typ oder
vom Hersteller empfohlene Batterien verwendet werden.
Entsorgung der gebrauchten Batterien nur nach den vom
Hersteller angegebenen Anweisungen.

CAUTION FOR BATTERY DISPOSAL

(For USA,CANADA)

Contains lithium-ion battery. Must be disposed of properly.
Remove the battery from the product and contact
federal or state environmental
agencies for information on recycling and disposal options.

SHARP

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Digital Document System Group
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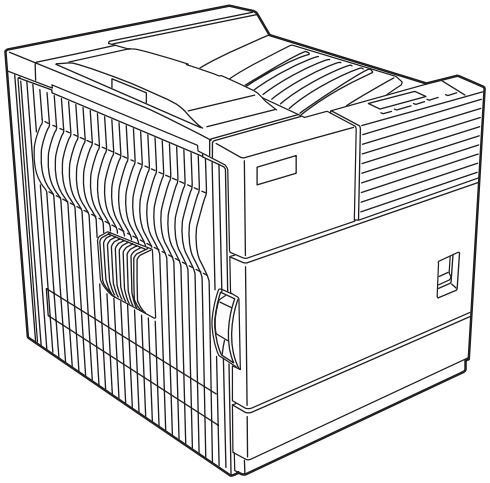
2002 February Printed in Japan (N)

SHARP SERVICE MANUAL

CODE : 00ZARP350/A1E



LASER PRINTER

MODEL AR-P350 AR-P450

OPTIONS **AR-HD3 / AR-PK1**

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Parts marked with "⚠" are important for maintaining the safety of the set.
Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

SHARP CORPORATION

This document has been published to be used for after sales service only.
The contents are subject to change without notice.

CAUTION

This product is a class 1 laser product that complies with 21CFR 1040.10 and 1040.11 of the CDRH standard and IEC825. This means that this machine does not produce hazardous laser radiation. The use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.
This laser radiation is not a danger to the skin, but when an exact focusing of the laser beam is achieved on the eye's retina, there is the danger of spot damage to the retina.
The following cautions must be observed to avoid exposure of the laser beam to your eyes at the time of servicing.

1) When a problem in the laser optical unit has occurred, the whole optical unit must be exchanged as a unit, not as individual parts.
2) Do not look into the machine with the main switch turned on after removing the developer unit, toner cartridge, and drum cartridge.
3) Do not look into the laser beam exposure slit of the laser optical unit with the connector connected when removing and installing the optical system.
4) The middle frame contains the safety interlock switch.
   Do not defeat the safety interlock by inserting wedges or other items into the switch slot.

Warning!
This product is a class A product.
If it is operated in households, offices or similar surroundings, it can produce radio interferences at other appliances, so that the user has to take adequate countermeasures.

CLASS 1 LASER PRODUCT

LASER KLASSE 1

LUOKAN 1 LASERLAITE

KLASS 1 LASERAPPARAT

VAROITUS!
LAITTEEN KÄYTTÄMINEN MUULLA KUIN TÄSSÄ KÄYTTÖOHJEESSA MAINITULLA TAVALLA SAATTAA ALTISTAA KÄYTTÄJÄN TURVALLISUUSLUOKAN 1 YLITTÄVÄLLE NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE.

VARNING
OM APPARATEN ANVÄNDS PÅ ANNAT SÄTT ÄN I DENNA BRUKSANVISNING SPECIFICERATS, KAN ANVÄNDAREN UTSÄTTAS FÖR OSYNLIG LASERSTRÅLNING, SOM ÖVERSKRIDER GRÄNSEN FÖR LASERKLASS 1.

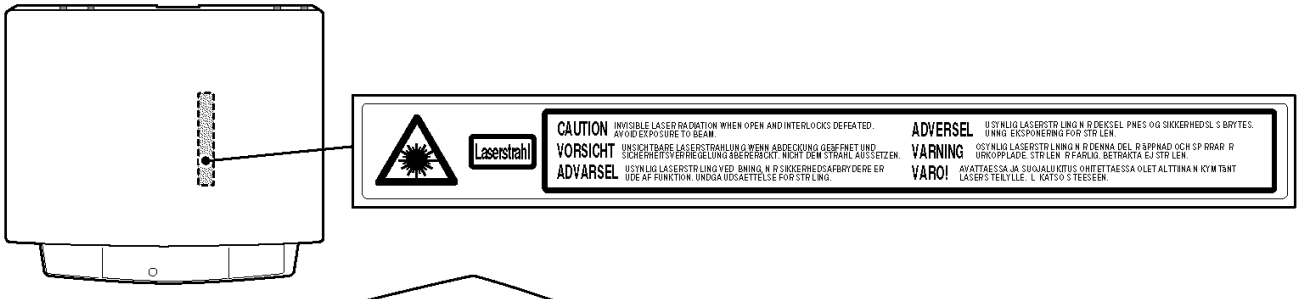
CAUTION
INVISIBLE LASER RADIATION,
WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.

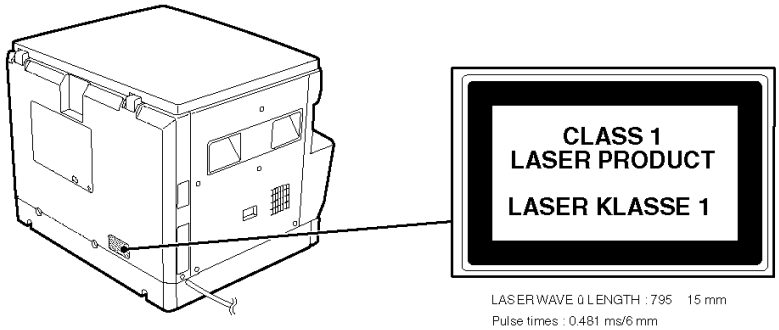
VORSICHT
UNSICHTBARE LASERSTRAHLUNG,
WENN ABDECKUNG GEÖFFNET UND SICHERHEITSVERRIEGELUNG ÜBERBRÜCKT. NICHT DEM STRAHL AUSSETZEN.

VARO !
AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE ÄLÄ KATSO SÄTEESEEN.

ADVARSEL
USYNLIG LASERSTRÅLNING VED ÅBNING, NÅR SIKKERHEDSBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSAETTELSE FOR STRÅLNING.

VARNING !
OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN. – STRÅLEN ÄR FARLIG.


Laserstrahl
CAUTION INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.
VORSICHT UNSICHTBARE LASERSTRAHLUNG WENN ABDECKUNG GEÖFFNET UND SICHERHEITSVERRIEGELUNG ÜBERBRÜCKT. NICHT DEM STRAHL AUSSETZEN.
ADVARSEL USYNLIG LASERSTRÅLNING VED ÅBNING, NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSAETTELSE FOR STRÅLNING.
ADVERSEL USYNLIG LASERSTRÅLNING NÅR DEKSEL PNES OG SIKKERHEDSLÅS BRYTES. UNNG EKSPONERING FOR STRÅLEN.
VARNING OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD. STRÅLEN. BETRAKTA EJ STRÅLEN.
VARO! AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.



LASER WAVE LENGTH : 795 15 mm
Pulse times : 0.481 ms/6 mm
Out put power : 5 mW

Disconnect the AC cord before servicing the unit.

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[1] GENERAL

1. Note for servicing

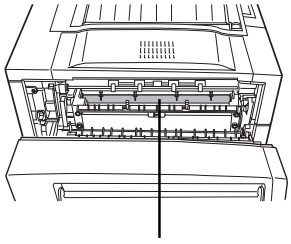
Pictogram

This Service Manual uses some pictographs to assure safe operation. Please understand the meanings of pictographs before servicing.

CAUTION: If this CAUTION is ignored, an injury or damage to property could occur.

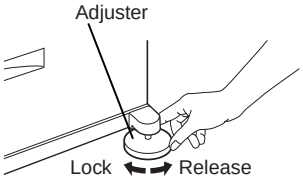
A.Cautions for servicing

1) Do not touch the photoconductive drum. Scratches or smudges on the drum will cause dirty printouts.
2) The fusing unit is extremely hot. Exercise care in this area.



Fusing unit

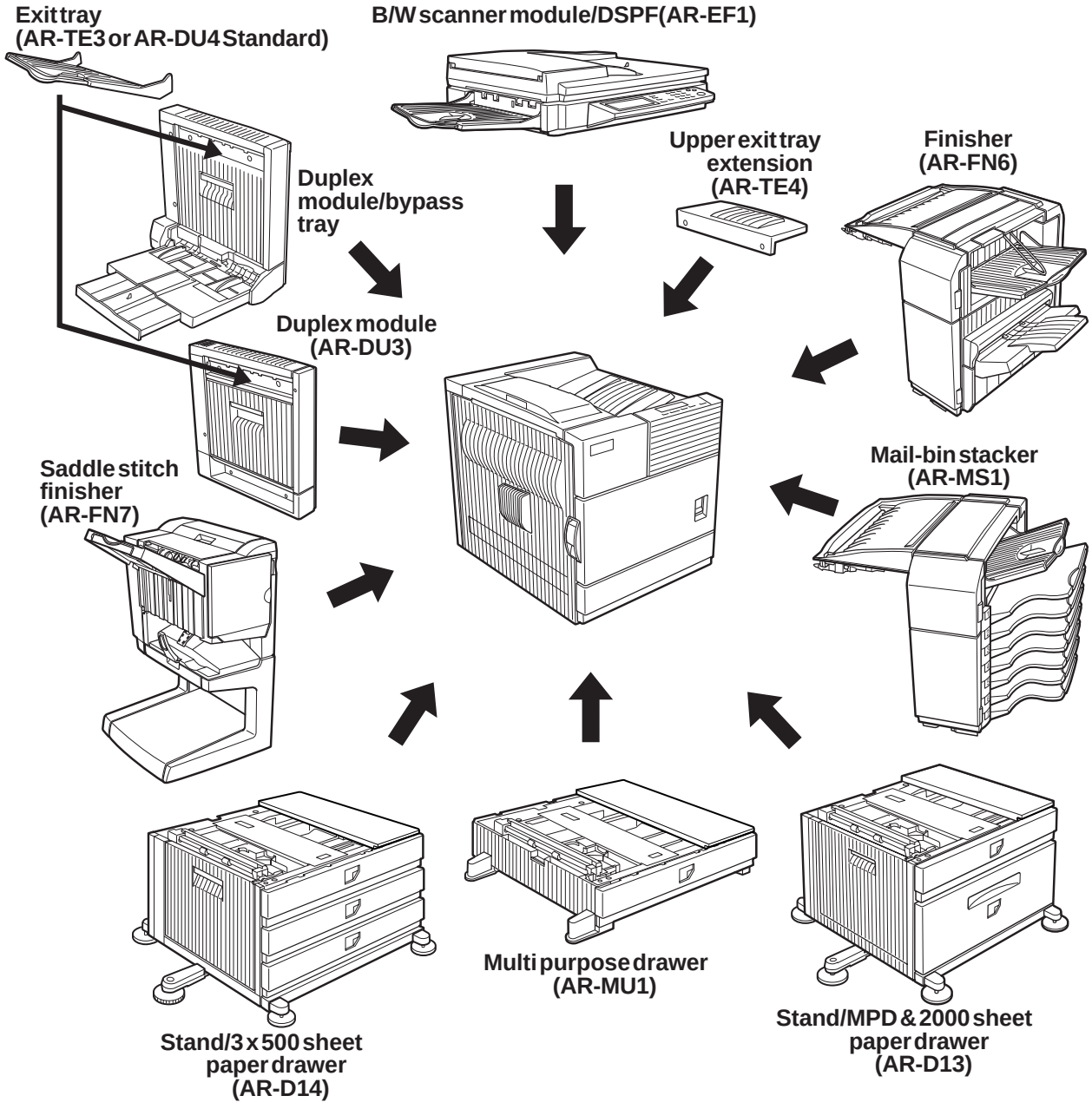
3) Do not look directly at the light source of the scanner module. Doing so may damage your eyes.
4) Five adjusters are provided on all optional stand/paper drawer units. These adjusters should be lowered until they contact the floor.



5) Do not make any modifications to this machine. Doing so may result in personal injury or damage to the machine.
6) Since this machine is heavy, it is recommended that it be moved by more than one person to prevent injury.
7) When connecting this machine to a computer, be sure to first turn both the computer and the machine off.
8) Do not print anything which is prohibited from printing by law. The following items are normally prohibited from printing by national law. Other items may be prohibited by local law.
   - •Money
   - •Stamps
   - •Bonds
   - •Stocks
   - •Bank drafts
   - •Checks
   - •Passports
   - •Driver's licenses
9) Do not throw toner or a toner cartridge into fire. Toner may be spattered, causing a burn.
10) Store toner or toner cartridges in a hard-to-reach place for children.

[2] CONFIGURATION

1.System Configurations



2. Standard

Category	Model Name	Other options required for the installation/mounting. (Such option has be ordered separately.)	Remarks
Printer model (35ppm)	AR-P350	•Multi Purpose Drawer (AR-MU1), or Stand/MPD&2000 Sheet Paper Drawer (AR-D13), or Three paper drawer stand (AR-D14) •Power Supply Unit (AR-DC1) is required for Stand/MPD&2000 Sheet Paper Drawer (AR-D13) and Three paper drawer stand (AR-D14)	
Printer model (45ppm)	AR-P450		
MFP model (35ppm)	AR-M350	•B/W Scanner module/DSPF (AR-EF1), or B/W Scanner module/SPF(AR-EF2) •Scanner Rack(AR-RK1) •Stand/MPD&2000 sheet paper drawer (AR-D13) or Three paper drawer stand (AR-D14) •Power supply unit (AR-DC1)	
MFP model (45ppm)	AR-M450		

3. List of combination of peripheral devices

As shown in the table below, some other peripheral devices (B) may be needed for installation of a peripheral device (A) and some peripheral devices cannot be installed together.

			B																						
			B/W scanner module/DSPF	Scanner rack	Multi purpose drawer	Stand/3 x 500 sheet paper drawer	Stand/MPD & 2000 sheet	Duplex module/bypass tray	Duplex module	Saddle stitch finisher	Finisher	Mail-bin stacker	Exit tray	Upper exit tray extension	Punch unit	Multi-function controller board	Print server card	PS3 expansion kit	Network scanner expansion kit	Facsimile expansion kit	Fax memory (8 MB)	Power supply unit	Hard disk drive
	Related to scanner feature																						
A	B/W scanner module/DSPF	AR-EF1	—	○	×	○*1										○						○	
A	Scanner rack	AR-RK1	○*1	—	×	○*1										○						○	
	Related to paper feed unit																						
A	Multi purpose drawer	AR-MU1	×	×	—	×	×			×					×				×	×	×		
A	Stand/3 x 500 sheet paper drawer	AR-D14			×	—	×															○	
A	Stand/MPD & 2000 sheet paper drawer	AR-D13			×	×	—															○	
A	Duplex module/bypass tray	AR-DU4			○*1			—		×					×							○*2	
A	Duplex module	AR-DU3			○*1				—													○*2	
	Output units																						
A	Saddle stitch finisher	AR-FN7			×	○*1		×	○	—	×		×									○	
A	Finisher	AR-FN6			○*1					×	—	×		×	×							○	
A	Mail-bin stacker	AR-MS1			○*1						×	—		×								○	
A	Exit tray	AR-TE3						○*1		×	×	×	—		×								
A	Upper exit tray extension	AR-TE4									×	×		—									
A	Punch unit	AR-PN1			×	○*1		×	○	○	×		×		—							○	
	Related to extension of functions and others																						
A	PS3 expansion kit	AR-PK1																—					
A	Network scanner expansion kit	AR-NS2	○*1	○	×	○*1										○	○		—				
A	Facsimile expansion kit	AR-FX5	○*1	○	×	○*1										○				—			
A	Fax memory (8 MB)	AR-MM9	○*1	○	×	○*1										○				○	—	○	
A	Power supply unit	AR-DC1																				—	
A	Hard disk drive	AR-HD3																					—
A	Multi-function controller board	AR-M11	○*1	○	×	○*1										—							
A	Print server card	AR-NC5J															—						

○ = Must be installed together.
○*1 = Any of the units must be installed together.
○*2 = Must be installed for installation of the stand/3 x 500 sheet paper drawer or the stand/MPD & 2000 sheet paper drawer.
× = Cannot be installed together.

[3] SPECIFICATIONS

1.Basic Specification

A.Base Engine

(1) Form

AR-P350 / AR-P450	Desktop

(2) Engine speed

Paper size	AR-P350	AR-P450
A4, 8.5" x 11"	35ppm	45ppm
A5R/5.5" x 8.5"R	35ppm	45ppm
B5	35ppm	45ppm
B4/8.5" x 14	20ppm	22ppm
A3/11" x 17"	17ppm	20ppm

(3) Engine composition

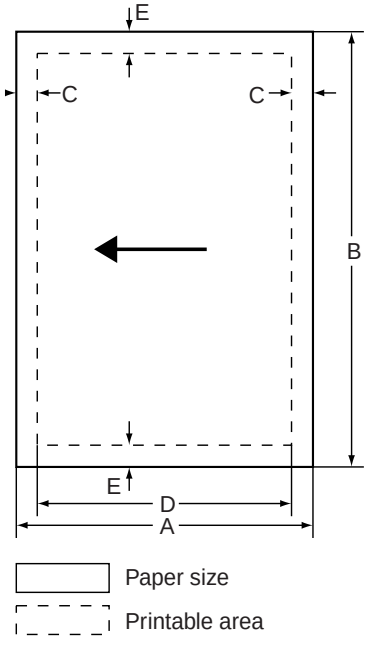
Photoconductor type	OPC (diameter of photoconductor : ø30mm)
Record method	Electrophotograph (laser)
Development method	Dry-type dual-component magnetic brush development
Charge method	Charged saw-tooth method
Transfer method	Transfer roller
Cleaning method	Counter blade
Fusing method	Heat roller
Used toner disposal	Toner recycling system

(4) Engine resolution

Resolution	Write :600dpi
Smoothing	Write :1200dpi equivalent
Gradation	Write :2 levels

(5) Printable area

The print area of this product is shown below.



If a printer driver for Windows or Macintosh is used for printing, the printable area will be smaller. The actual printable area depends on the printer driver to be used.

(in mm)

Paper size	A	B	C	D	E
A3	297	420	4	289	4
B4	257	364	4	242	4
A4	210	297	4	202	4
B5	182	257	4	168	4
A5	148	210	4	140	4
Japanese postcard	100	148	4	92	4
Ledger	279	432	4	271	4
Legal	216	356	4	208	4
Foolscap	216	330	4	208	4
Letter	216	279	4	208	4
Executive	184	267	4	183	4
Invoice	140	216	4	132	4
Com-10(envelope)	105	241	4	97	4
C5(envelope)	162	229	4	154	4
Monarch(envelope)	98	191	4	90	4
DL(envelope)	110	220	4	102	4
ISO B5(envelope)	176	250	4	168	4

(6) Warm-up

Warm-up time	Target: less than 95 seconds
Pre-heat requirement	Required
Jam recovery time	Target: about 30 seconds (Under standard condition of 60 seconds left after side cover opening, polygon motor halt)

(7) Power source

Voltage	100V system	200V system
	100-127V	220-240V
Frequency	50/60Hz	50/60Hz
Power cord		

(8) Power consumption

	AR-P350	AR-P450
Max. Power consump.	1350W	1350W
Average waiting mode	1200W	1200W

(9) Energy Star benchmark

	AR-P350	AR-P450
Low power mode	40W	75W
Recovery time from low power mode	TBD	TBD
Sleep mode	-	-
Transition time to sleep mode	TBD	TBD

(10) Noise

	AR-P350	AR-P450
At working	TBD	TBD
At waiting mode	TBD	TBD
At sleep mode	TBD	TBD

* Showing noise benchmark in each model as a whole system.

(11) Dimensions

External dimensions	428 x 559 x 468.5 (WxDxH) (mm)
Occupied space dimensions	x (W x D) (mm)
Weight	Approx. 35 kg (excluded to Developer, Process, Controller unit)

B. Document Feeding Equipment

(1) One-drawer tray (included in the base engine)

Paper feed method	One-drawer tray	
Sizes to be fed	A4, B5, 8.5" x 11"	
Paper capacity	500 sheets (at 80g/m²)	
Media available for paper feeding	Plain paper 60 - 105g/m², 16 - 28lbs	
Paper type	Plain, recycled, pre-printed, pre-punched, color, letter head	
Paper size switching	To be switched by user (paper size to be entered from the operation panel).	
Dehumidification heater	Not provided	
Balance detection	Provided (paper empty and 3 steps)	
Default size setting	100V system	200V system
	8.5" x 11"	A4
Mounting/demounting of the tray	Provided	

C. Output Equipment

(1) Face-down Exit Tray (included in the base engine)

Output position/ method	Face-down output at the upper side of main unit
Output paper capacity	400 sheets (80g/m² sheet)
Output paper size	A3, B4, A4, A4R, B5, B5R, A5R 11 " x 17", 8.5" x 14", 8.5" x 13", 8.5" x 11 ", 8.5" x 11 "R, 5.5" x 8.5"R Executive, postal card, Monarch (98 x 191) Com-10 (105 x 241), DL (110 x 220), C5 (162 x 229), ISO B5 (176 x 250)
Spec of media for paper output	Tracing paper : 52 ~ 59g/m² / 14 ~ 15lbs Plain paper : 60 ~ 128g/m² / 16 ~ 34lbs Index paper : 176g/m² / 47lbs Cover paper : 205g/m² / 54 ~ 55lbs Transparency firm : (TBD)
Remaining paper detection	Not provided
Exit tray full detection	Provided

2.Printer Function Specification

A. Platform

IBM PC/AT (Include compatible machine) Macintosh (680x0), Power Macintosh, iMac, G3Macintosh

* For Macintosh OS, the AR-PK1 is required.

B. Support OS

Custom PS	Windows 95/98/Me
	Windows NT 4.0 Windows 2000
	Mac OS 7.6 to Mac OS 9
Custom PCL5e/6(XL) SPDL	Windows 95/98/Me
	Windows NT 4.0 Windows 2000
PPD	Windows 95/98/Me
	Windows NT 4.0 Windows 2000
	Mac OS 8.5.1 - Mac OS 9

* For Macintosh OS, the AR-PK1 is required.

C. Support OS

PCL5e compatible, PCL6 compatible, PostScript Level 2 compatible, PostScript 3 compatible

D. ESC/P • ESC/P Super

Emulation	ESC/P(VP-1100), ESC/P Super
Embedded font	Japanese:Mincho, Gothic (bitmap) ANK:Roman, Sans Serif (bitmap)

E. Print Function

(1) General

		When an optional PS3 expansion kit is installed		
Function	PCL5e/ PCL6	PS	PPD (Windows)	PPD (Macintosh)
Copies	1 - 999	1 - 999	1 - 999	1 - 999
Orientation	Yes	Yes	Yes	Yes
Duplex print	Yes	Yes	Yes	Yes
Saddle stitch	Yes	Yes	N/N	N/A
Binding edge	Left/top/ right	Left/top/ right	Long/short	Long/short
N-up	2/4/6/8	2/4/6/8	2/4*3*4	2/4/6/9/16
N-up direction	Fixed	Fixed	Fixed	Selectable
N-up border line	Yes	Yes	Yes(always)	Yes

(2) Paper input

		When an optional PS3 expansion kit is installed		
Function	PCL5e/ PCL6	PS	PPD (Windows)	PPD (Macintosh)
Paper size	Yes	Yes	Yes	Yes
Custom paper size	1 size	1 size	3 sizes*3*5	N/A
Source selection	Yes	Yes	Yes	Yes
Different first page	Yes	Yes	N/A	Yes
Transparency inserts	Yes	Yes	N/A	Yes

(3) Paper output

		When an optional PS3 expansion kit is installed		
Function	PCL5e/ PCL6	PS	PPD (Windows)	PPD (Macintosh)
Output tray selection	Yes	Yes	Yes	Yes
Mail bin	Yes	Yes	Yes	Yes
Staple	Yes	Yes	Yes	Yes
Offset	Yes	Yes	Yes	Yes
Punch	Yes	Yes	Yes	Yes

(4) Graphic

		When an optional PS3 expansion kit is installed		
Function	PCL5e/ PCL6	PS	PPD (Windows)	PPD (Macintosh)
Resolution	600/300 dpi	600 dpi	600 dpi	600 dpi
Halftone	N/A	Yes	Yes	N/A
Graphic mode	Yes	N/A	N/A	N/A
Smoothing	Yes	Yes	Yes	Yes
Toner save	Yes	Yes	Yes	Yes
Photo enhancement	Yes*8	Yes	N/A	N/A
Negative image	N/A	Yes	Yes	Yes
Mirror image	N/A	Horizontal/ vertical	Horizontal	Yes
Zoom	N/A	N/A	Yes	Yes
Fit to page	Yes	Yes	N/A	N/A

(5) Font

		When an optional PS3 expansion kit is installed		
Function	PCL5e/ PCL6	PS	PPD (Windows)	PPD (Macintosh)
Resident font	45 fonts	136 fonts	136 fonts*6	35 fonts
Download font	Bitmap TrueType, Graphic	Bitmap Type1 TrueType	Bitmap Type1 TrueType	N/A

(6) Others

		When an optional PS3 expansion kit is installed		
Function	PCL5e/ PCL6	PS	PPD (Windows)	PPD (Macintosh)
Watermark*7	Yes	Yes	Yes	Yes
Overlay	Yes	Yes	N/A	N/A
Job retention*1	Yes	Yes	N/A	Yes
Account control	Yes	Yes	N/A	Yes
Custom settings	Yes	Yes	N/A	N/A
Automatic configuration*2	Yes	Yes	N/A	Yes
Job end notification	Yes	Yes	N/A	N/A

* 1 In the models without a hard disk drive, an optional hard disk drive must be installed .
* 2 Functions when peripheral devices are installed.
* 3 Not supported in the Windows NT 4.0 environment.
* 4 2/4/6/9/16 is supported in the Windows 2000 environment.
* 5 Only one size is supported in the Windows 2000 environment.
* 6 Only 35 fonts are supported in the Windows NT 4.0 environment.
* 7 This function is limited for PPD.
* 8 PCL6 only

F. Compatibility

PCL 5e compatibility	Target for PCL5e is to be compatible with HP LaserJet 4000. Small margin difference, rendering difference by different font family, default and transfer function difference are not to be included in the compatibility. All the PJL commands are not necessarily included in the compatibility.
PCL6 compatibility	Target for PCL6 is to be compatible with HP LaserJet 4000. Small margin difference, rendering difference by different font family, default and transfer function difference are not to be included in the compatibility. All the PJL commands are not necessarily included in the compatibility.
PostScript Compatibility	Roman PostScript is targeted to be compatible with Adobe PostScript as performed in HP LaserJet 4000. Small margin difference, rendering difference by different font family, default and transfer function difference are not to be included in the compatibility.
ESC/P and ESC/P Super compatibility	Target for ESC/P and ESC/P Super is to be compatible with Epson VP-1100. Small margin difference, rendering difference by different font family, default and transfer function difference are not to be included in the compatibility.

3.Expanded RAM

Installation of an expanded RAM will avoid the following status.

1) Time out error reduction
2) Spool time reduction
3)

Use a commercially available RAM of the following specifications.
If a RAM which does not meet the specifications is installed, it may cause a trouble such as that it is not recognized or its capacity is not correctly recognized.

<Spesification>

DIMM TYPE	168pin 3.3V Unbuffered SDRAM DIMM Non-ECC
DIMM capacity	64MByte, 128MByte, 256MByte
CAS LATENCY	CL=2
SDRAM CLOCK	For PC100, PC133
SPD	Supporting
Parity	Not support
ECC	Not support

[4] CONSUMABLE PARTS

1.Supply system table

A.USA

NO	Name	Content		Life	Product name	Remark
1	Toner CA(Black) with IC	Toner(Toner : Net Weight 814g)		30K	AR-450MT (*1 AR-450MT-J)	*Life setup is based on A4 6%
2	Developer	Developer(Developer : Net Weight 450g)		100K	AR-450ND	
3	Drum	Drum	x1	50K	AR-450DR	
4	100K maintenance kit	Cleaner blade Drum separation pawl	x1 x4	100K	AR-450KA1	
5	Transfer roller kit	Transfer roller Transfer charging plate	x1 x2	100K	AR-450TX	
6	Upper heat roller kit	Upper heat roller Fusing separation pawl (Upper)	x1 x4	200K	AR-450UH	
7	Lower heat roller kit	Lower heat roller Fusing separation pawl (Lower)	x1 x2	100K	AR-450LH	
8	Cleaner blade	Cleaner blade	x10	100K(x10)	AR-450CB	AR-450CB=(AR-450BL)x10
9	Staple cartridge	Staple cartridge	x3	5000x3	AR-SC1	Common with cartridge for AR-FN4 & AR-FN6
10	Staple cartridge	Staple cartridge	x3	5000x3	AR-SC2	Common with cartridge for AR-FN7

*1: For USA Government

Note1: Print on Master/individual carton:Toner/Developer in 2 languages (English/French), DR in 4 languages (English/French/German/Spanish).

Note2: Packed with machine: DR 50K/Developer UN/Process UN

Note3: The other maintenance parts which are not listed above are registered as service parts.

B.CANADA/Latin America

NO	Name	Content		Life	Product name	Remark
1	Toner CA(Black) with IC	Toner(Toner : Net Weight 814g)		30K	AR-450MT	*Life setup is based on A4 6%
2	Developer	Developer(Developer : Net Weight 450g)		100K	AR-450ND	
3	Drum	Drum	x1	50K	AR-450DR	
4	100K PM kit	Cleaner blade Screen grid Toner reception seal Side mall DV blade DV side seal Transfer roller Transfer charging plate Charging plate	x1 x1 x1 each x1 x1 each x1 x1 x1 x1	100K	AR-450KA	
5	200K PM kit	Upper heat roller Lower heat roller Fusing separation pawl (Upper) Fusing separation pawl (Lower)	x1 x1 x4 x2	100K	AR-450KB	
6	Staple cartridge	Staple cartridge	x3	5000x3	AR-SC1	Common with cartridge for AR-FN4 & AR-FN6
7	Staple cartridge	Staple cartridge	x3	5000x3	AR-SC2	Common with cartridge for AR-FN7

Note1: Print on Master/individual carton:Toner/Developer in 2 languages (English/French), DR in 4 languages (English/French/German/Spanish).

Note2: Packed with machine: DR 50K/Developer UN/Process UN

Note3: The other maintenance parts which are not listed above are registered as service parts.

C.Europe/Australia/New Zealand

NO	Name	Content		Life	Product name	Remark
1	Toner CA(Black) with IC	Toner(Toner : Net Weight 814g)		30K	AR-450LT	*Life setup is based on A4 6%
2	Developer	Developer(Developer : Net Weight 450g)		100K	AR-450DV	
3	Drum	Drum	x1	50K	AR-450DM	
4	100K PM kit	Cleaner blade	x1	100K	AR-450KA	
		Screen grid	x1			
		Toner reception seal	x1			
		Side mall	each x1			
		DV blade	x1			
		DV side seal	each x1			
		Transfer roller	x1			
		Transfer charging plate	x1			
		Charging plate	x1			
5	200K PM kit	Upper heat roller	x1	100K	AR-450KB	
		Lower heat roller	x1			
		Fusing separation pawl (Upper)	x4			
		Fusing separation pawl (Lower)	x2			
6	Staple cartridge	Staple cartridge	x3	5000x3	AR-SC1	Common with cartridge for AR-FN4 & AR-FN6
7	Staple cartridge	Staple cartridge	x3	5000x3	AR-SC2	Common with cartridge for AR-FN7

Note1: Print on Master/individual carton:4 languages (English/French/German/Spanish).
Note2: Packed with machine: DR 50K/Developer UN/Process UN
Note3: The other maintenance parts which are not listed above are registered as service parts.

D.Middle East/ Africa

NO	Name	Content		Life	Product name	Remark
1	Toner CA(Black) with IC	Toner(Toner : Net Weight 814g)		30K	AR-450ET	*Life setup is based on A4 6%
2	Developer	Developer(Developer : Net Weight 450g)		100K	AR-450SD	
3	Drum	Drum	x1	50K	AR-450DR	
4	100K PM kit	Cleaner blade	x1	100K	AR-450KA	
		Screen grid	x1			
		Toner reception seal	x1			
		Side mall	each x1			
		DV blade	x1			
		DV side seal	each x1			
		Transfer roller	x1			
		Transfer charging plate	x1			
		Charging plate	x1			
5	200K PM kit	Upper heat roller	x1	100K	AR-450KB	
		Lower heat roller	x1			
		Fusing separation pawl (Upper)	x1			
		Fusing separation pawl (Lower)	x1			
6	Staple cartridge	Staple cartridge	x3	5000x3	AR-SC1	Common with cartridge for AR-FN4 & AR-FN6
7	Staple cartridge	Staple cartridge	x3	5000x3	AR-SC2	Common with cartridge for AR-FN7

Note1: Print on Master/individual carton:4 languages (English/French/German/Spanish).
Note2: Packed with machine: DR 50K/Developer UN/Process UN
Note3: The other maintenance parts which are not listed above are registered as service parts.

E.Israel/Russia/CIS/Philippines

NO	Name	Content		Life	Product name	Remark
1	Toner CA(Black) with IC	Toner(Toner : Net Weight 814g)		30K	AR-450ET	*Life setup is based on A4 6%
2	Developer	Developer(Developer : Net Weight 450g)		100K	AR-450SD	
3	Drum	Drum	x1	50K	AR-450DR	
4	100K PM kit	Cleaner blade	x1	100K	AR-450KA	
		Screen grid	x1			
		Toner reception seal	x1			
		Side mall	each x1			
		DV blade	x1			
		DV side seal	each x1			
		Transfer roller	x1			
		Transfer charging plate	x1			
		Charging plate	x1			
5	200K PM kit	Upper heat roller	x1	100K	AR-450KB	
		Lower heat roller	x1			
		Fusing separation pawl (Upper)	x4			
		Fusing separation pawl (Lower)	x2			
6	Staple cartridge	Staple cartridge	x3	5000x3	AR-SC1	Common with cartridge for AR-FN4 & AR-FN6
7	Staple cartridge	Staple cartridge	x3	5000x3	AR-SC2	Common with cartridge for AR-FN7

Note1: Print on Master/individual carton:4 languages (English/French/German/Spanish).
Note2: Packed with machine: DR 50K/Developer UN/Process UN
Note3: The other maintenance parts which are not listed above are registered as service parts.

F.Asia

NO	Name	Content		Life	Product name	Remark
1	Toner CA(Black) with IC	Toner(Toner : Net Weight 814g)		30K	AR-450CT	*Life setup is based on A4 6%
2	Developer	Developer(Developer : Net Weight 450g)		100K	AR-450SD	
3	Drum	Drum	x1	50K	AR-450DR	
4	100K PM kit	Cleaner blade	x1	100K	AR-450KA	
		Screen grid	x1			
		Toner reception seal	x1			
		Side mall	each x1			
		DV blade	x1			
		DV side seal	each x1			
		Transfer roller	x1			
		Transfer charging plate	x1			
		Charging plate	x1			
5	200K PM kit	Upper heat roller	x1	100K	AR-450KB	
		Lower heat roller	x1			
		Fusing separation pawl (Upper)	x1			
		Fusing separation pawl (Lower)	x1			
6	Staple cartridge	Staple cartridge	x3	5000x3	AR-SC1	Common with cartridge for AR-FN4 & AR-FN6
7	Staple cartridge	Staple cartridge	x3	5000x3	AR-SC2	Common with cartridge for AR-FN7

Note1: Print on Master/individual carton:4 languages (English/French/German/Spanish).
Note2: Packed with machine: DR 50K/Developer UN/Process UN
Note3: The other maintenance parts which are not listed above are registered as service parts.

G.Hong kong/China

NO	Name	Content		Life	Product name	Remark
1	Toner CA(Black) with IC	Toner(Toner : Net Weight 814g)		30K	AR-450CT-C	*Life setup is based on A4 6%
2	Developer	Developer(Developer : Net Weight 450g)		100K	AR-450SD-C	
3	Drum	Drum	x1	50K	AR-450DR-C	
4	100K PM kit	Cleaner blade	x1	100K	AR-450KA	
		Screen grid	x1			
		Toner reception seal	x1			
		Side mall	each x1			
		DV blade	x1			
		DV side seal	each x1			
		Transfer roller	x1			
		Transfer charging plate	x1			
		Charging plate	x1			
5	200K PM kit	Upper heat roller	x1	100K	AR-450KB	
		Lower heat roller	x1			
		Fusing separation pawl (Upper)	x4			
		Fusing separation pawl (Lower)	x2			
6	Staple cartridge	Staple cartridge	x3	5000x3	AR-SC1	Common with cartridge for AR-FN4 & AR-FN6
7	Staple cartridge	Staple cartridge	x3	5000x3	AR-SC2	Common with cartridge for AR-FN7

Note1: Print on Master/individual carton:2 languages (English/Chinease).
Note2: Packed with machine: DR 50K/Developer UN/Process UN
Note3: The other maintenance parts which are not listed above are registered as service parts.

H.Taiwan

NO	Name	Content		Life	Product name	Remark
1	Toner CA(Black) with IC	Toner(Toner : Net Weight 814g)		30K	AR-450ST-T	*Life setup is based on A4 6%
2	Developer	Developer(Developer : Net Weight 450g)		100K	AR-450SD-C	
3	Drum	Drum	x1	50K	AR-450DR-C	
4	100K PM kit	Cleaner blade	x1	100K	AR-450KA	
		Screen grid	x1			
		Toner reception seal	x1			
		Side mall	each x1			
		DV blade	x1			
		DV side seal	each x1			
		Transfer roller	x1			
		Transfer charging plate	x1			
		Charging plate	x1			
5	200K PM kit	Upper heat roller	x1	100K	AR-450KB	
		Lower heat roller	x1			
		Fusing separation pawl (Upper)	x4			
		Fusing separation pawl (Lower)	x2			
6	Staple cartridge	Staple cartridge	x3	5000x3	AR-SC1	Common with cartridge for AR-FN4 & AR-FN6
7	Staple cartridge	Staple cartridge	x3	5000x3	AR-SC2	Common with cartridge for AR-FN7

Note1: Print on Master/individual carton:4 languages (English/French/German/Spanish).
Note2: Packed with machine: DR 50K/Developer UN/Process UN
Note3: The other maintenance parts which are not listed above are registered as service parts.

2.Production number identification

A. Drum cartridge

The lot number, printed on the front side flange, is composed of 10 digits, each digit showing the following content:

1	2	3	4	5	6	7	8	9	10

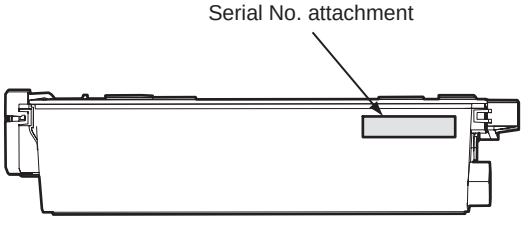
1 Number
For this model, this digit is 2.
2 Alphabet
Indicates the model conformity code. T for this model.
3 Number
Indicates the end digit of the production year.
4 Number or X, Y, Z
Indicates the production month.
X stands for October, Y November, and Z December.
5/6 Number
Indicates the production day on the month.
7 Number or X, Y, Z
Indicates the month of packing.
X stands for October, Y November, and Z December.
8/9 Number
Indicates the day of the month of packing.
10 Alphabet
Indicates the production factory. "A" for Nara Plant.

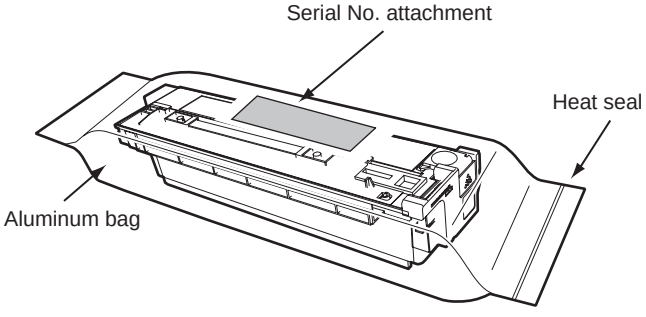
B. Toner cartridge

The lot number is of 7 digits, and each digit indicates as follows.
The lot number shall be printed in the position shown in the figure.

1	2	3	4	5	6	7

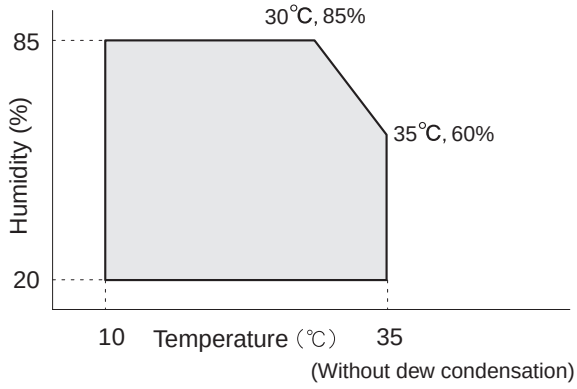
1 Version number (A - sequentially revised)
2 Numeral figure
Indicates the end digit of the production year.
3 Alphabet
Indicates the production factory. (B for SOCC)
4 Destination code
5,6 Numeral figures
Indicates the production day.
7 Numeral figure or X, Y, Z
Indicates the production month.
X stands for October, Y November, and Z December.





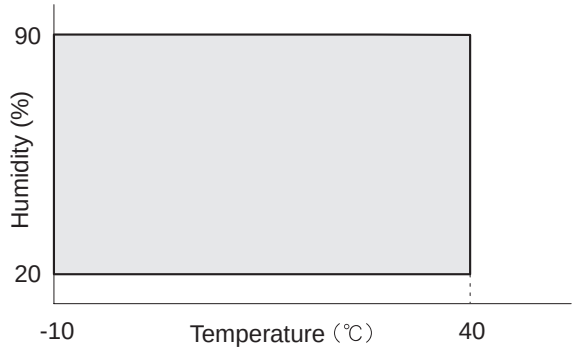
3. Environmental conditions

A. Operating conditions



(Without dew condensation)

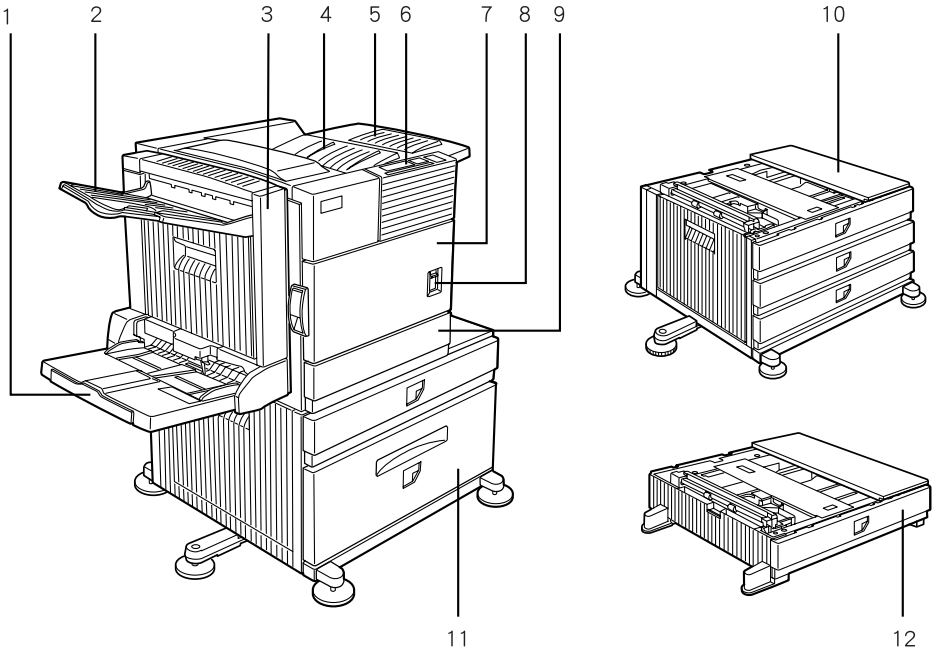
B. Storage conditions



(Without dew condensation)

[5] EXTERNAL VIEWS AND INTERNAL STRUCTURES

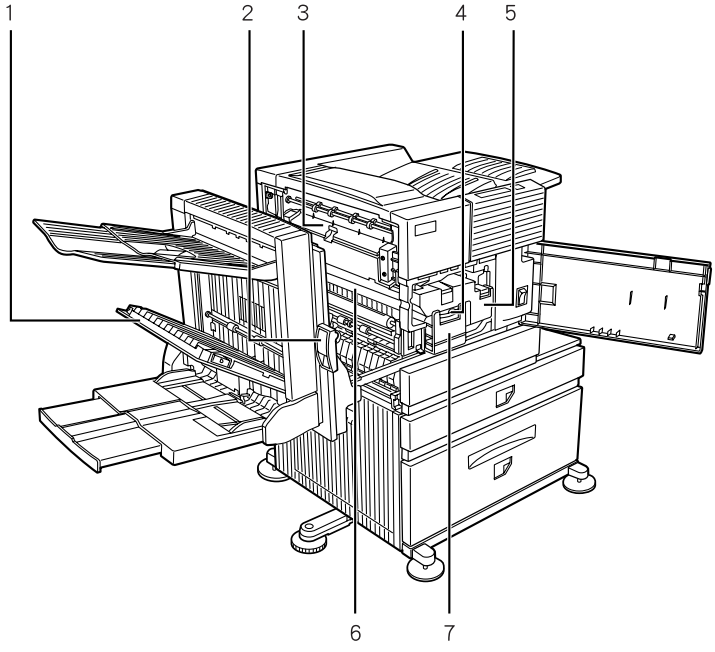
1.Appearance



1	Bypass tray *	2	Exit tray *	3	Duplex module *
4	Upper paper output area	5	Upper exit tray extension *	6	Operation panel
7	Front cover	8	Main switch	9	Paper tray 1
10	Stand / 3 x 500 sheet paper drawer *	11	Stand / MPD & 2000 sheet paper drawer *	12	Multi purpose drawer *

* 1, 2, 3, 5, 10, 11, and 12 are peripheral units.The configuration of peripheral units varies with the main unit model.

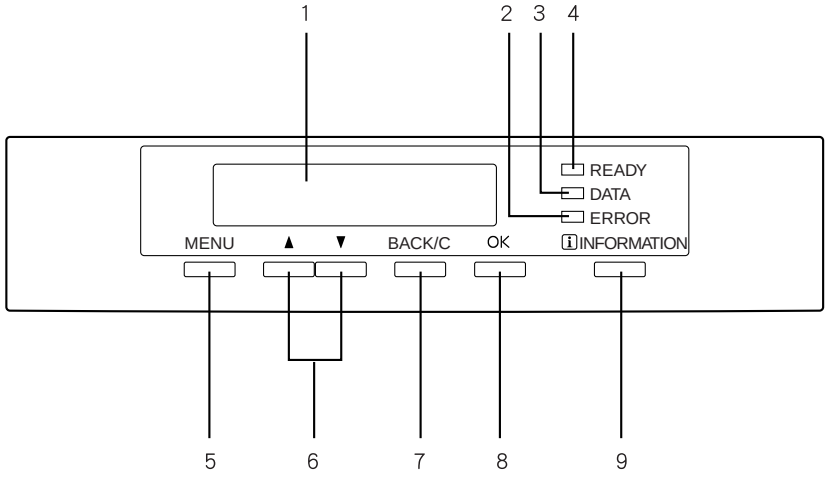
2.Internal



1	Duplex module side cover	2	Side cover open knob	3	Fusing unit
4	Developer cartridge	5	Toner cartridge	6	Photoconductive drum
7	Cartridge lock lever				

3.Operation panel

* This operation panel is valid only when a scanner unit is not installed.



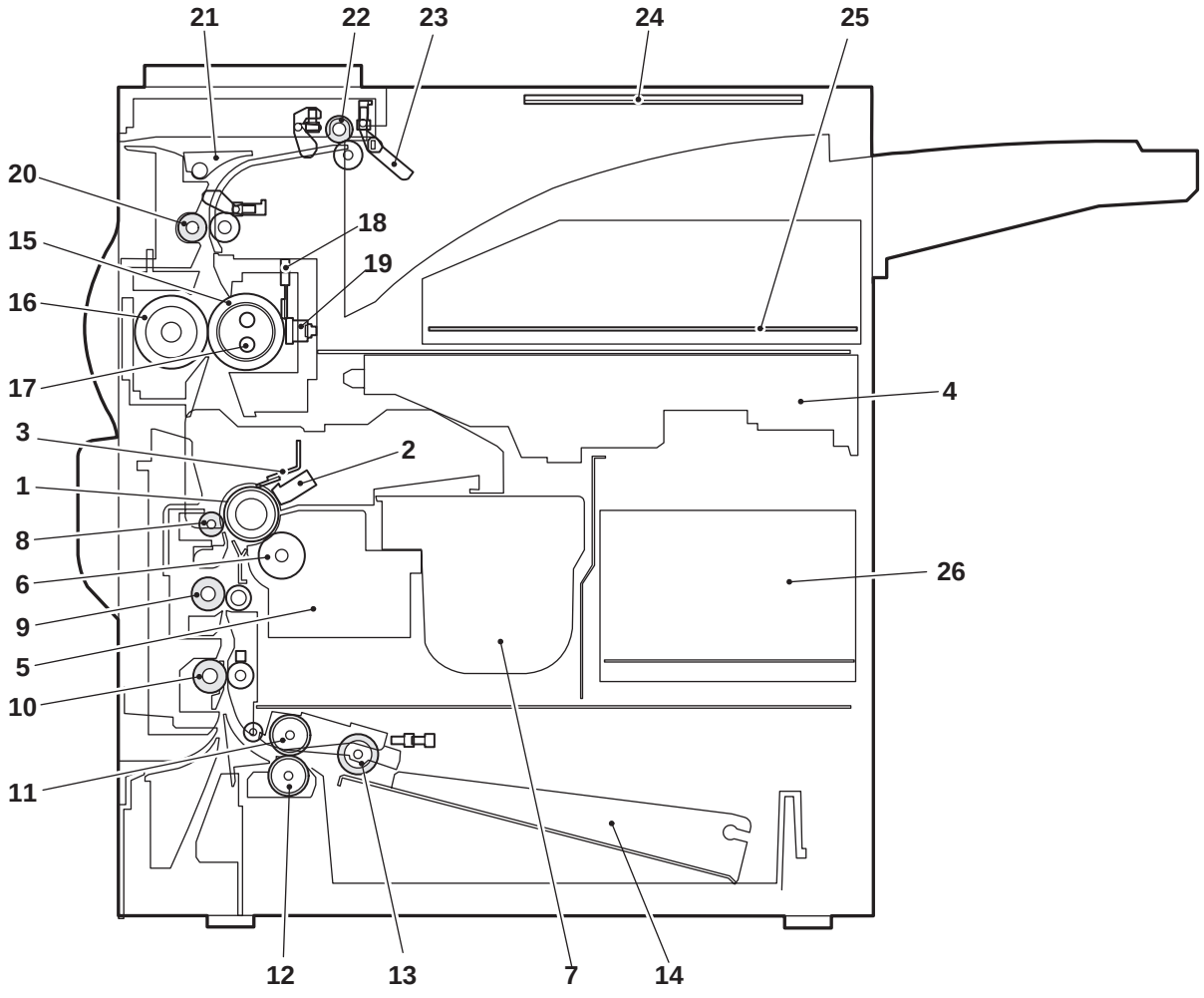
1	Message display	2	[ERROR] indicator	3	[DATA] indicator
4	[READY] indicator	5	[MENU] key	6	[▲/▼] keys
7	[BACK/C] key	8	[OK] key	9	[INFORMATION] key

<Function of each LED>

	READY	DATA	ERROR
ON	Print job reception enable	•When RIP-completed print data are stored in memory.	•When a trouble which can be canceled by the user occurred.
Flash		•When data are processed in the printer board (during RIP).	•When a trouble which requires service call occurred.
OFF	Print job reception disable	•Neither print data nor data under process are stored.	•No trouble

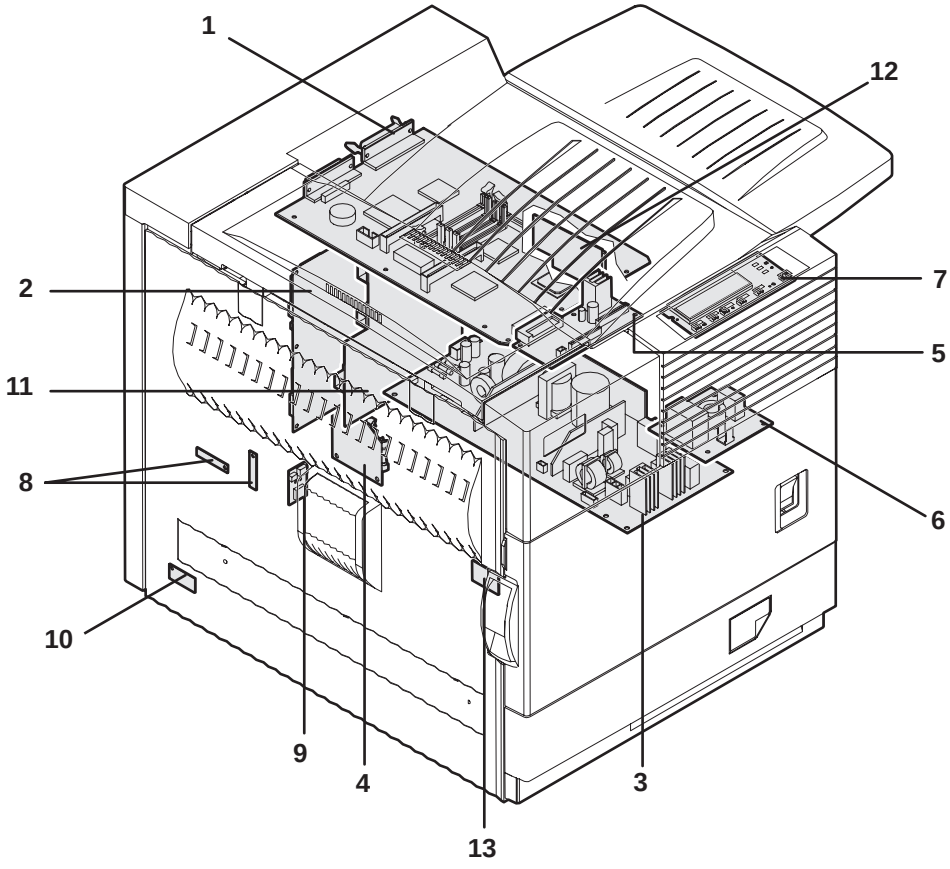
* RIP:Raster In Processor. Develops the print command into pixel information.

4. Cross sectional view



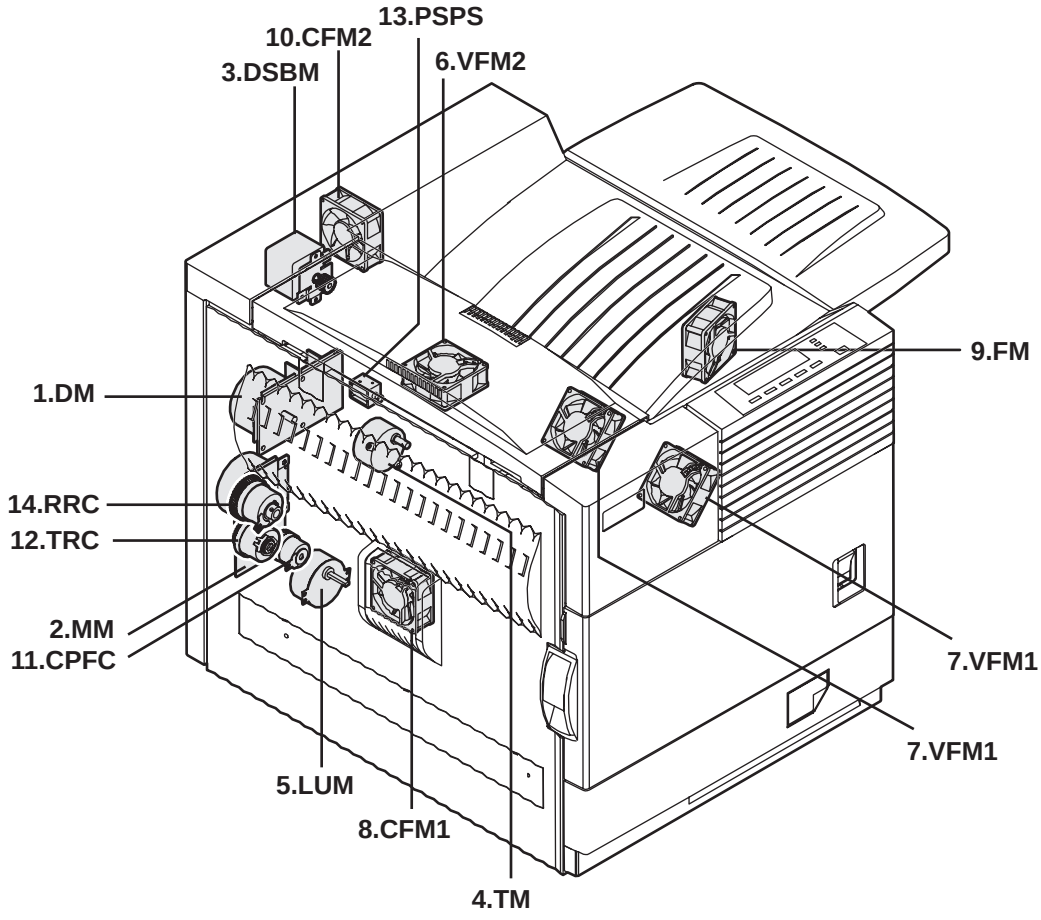
No.	Name	No.	Name
1	OPC drum	15	Upper heat roller
2	Main charger	16	Pressure roller
3	Cleaning blade	17	Heater roller
4	LSU	18	Thermistor
5	Developing unit	19	Thermostat
6	Magnet roller	20	Fusing back roller
7	Toner hopper	21	Reverse gate
8	Transfer roller	22	Paper exit roller
9	PS roller	23	Full detection lever
10	PS front roller	24	Printer operation PWB
11	Machine tray paper feed roller	25	Printer control PWB
12	Machine tray separation roller	26	Power unit
13	Machine tray take-up roller		
14	Machine tray rotating plate		

5. PWB



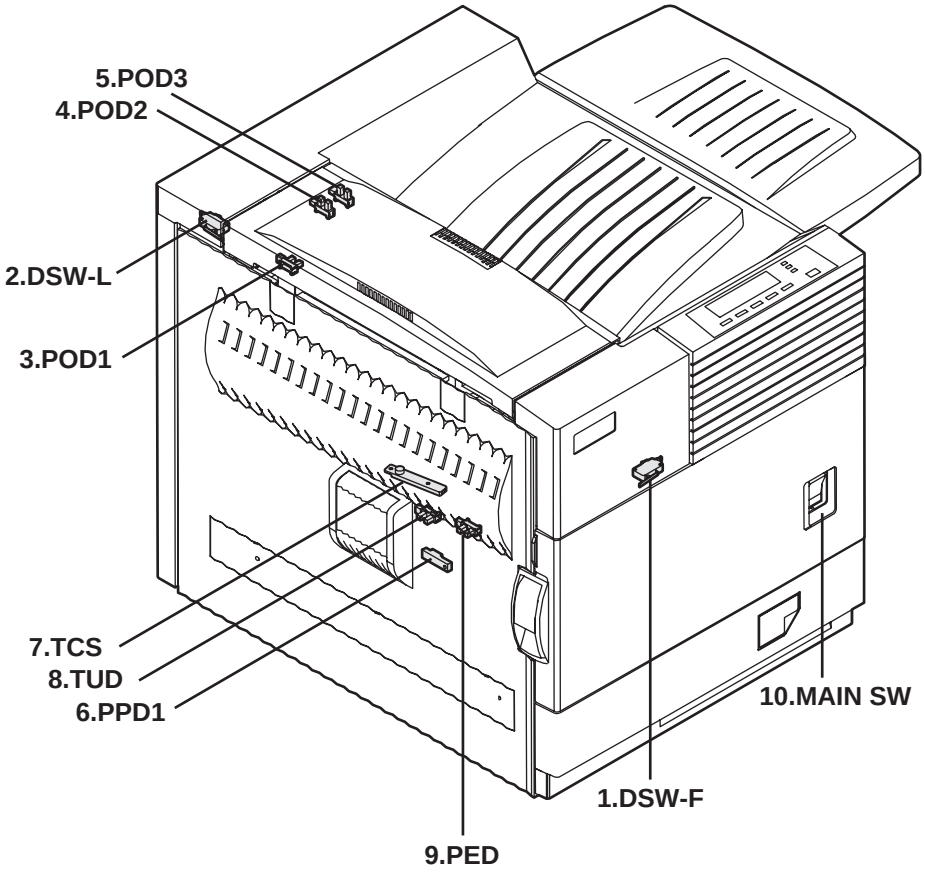
	Name	Function/Operation
1	PRT controller	Image process, image data communication control
2	PCU PWB	Overall control of the machine and options
3	Power unit	DC power supply
4	LD PWB (Inside LSU)	Laser ON control (Inside LSU: LSU cannot be disassembled.)
5	Mother PWB	Signal interface between PCU and the controller
6	Filter PWB	AC power input
7	Printer operation PWB	Key input, machine state display
8	High voltage resistor PWB	High voltage load adjustment
9	Cassette detection PWB	Paper cassette control
10	Drawer PWB	Fan control
11	High voltage PWB	High voltage power supply
12	Fuse PWB	Protection of the machine when an abnormal power is supplied.
13	Initial detection PWB (in the developing unit)	New toner cartridge detection

6. Motor, Clutch, Solenoid



	Code	Function/Operation	Type
1	DM	Drum motor	Brushless motor
2	MM	Main motor	Brushless motor
3	DSBM	Paper exit motor	Stepping motor
4	TM	Toner motor	Synchronous motor
5	LUM	Lift-up motor	Synchronous motor
6	VFM2	Exhaust fan motor	Fan motor
7	VFM1	Cooling fan motor	Fan motor
8	CFM1	Cooling fan motor	Fan motor
9	FM	Fan motor	Fan motor
10	CFM2	Cooling fan motor	Fan motor
11	CPFC	Paper cassette paper feed clutch	
12	TRC	Paper transport clutch	
13	PSPS	Separation solenoid	
14	RRC	Resist roller clutch	

7. Switch, Sensor



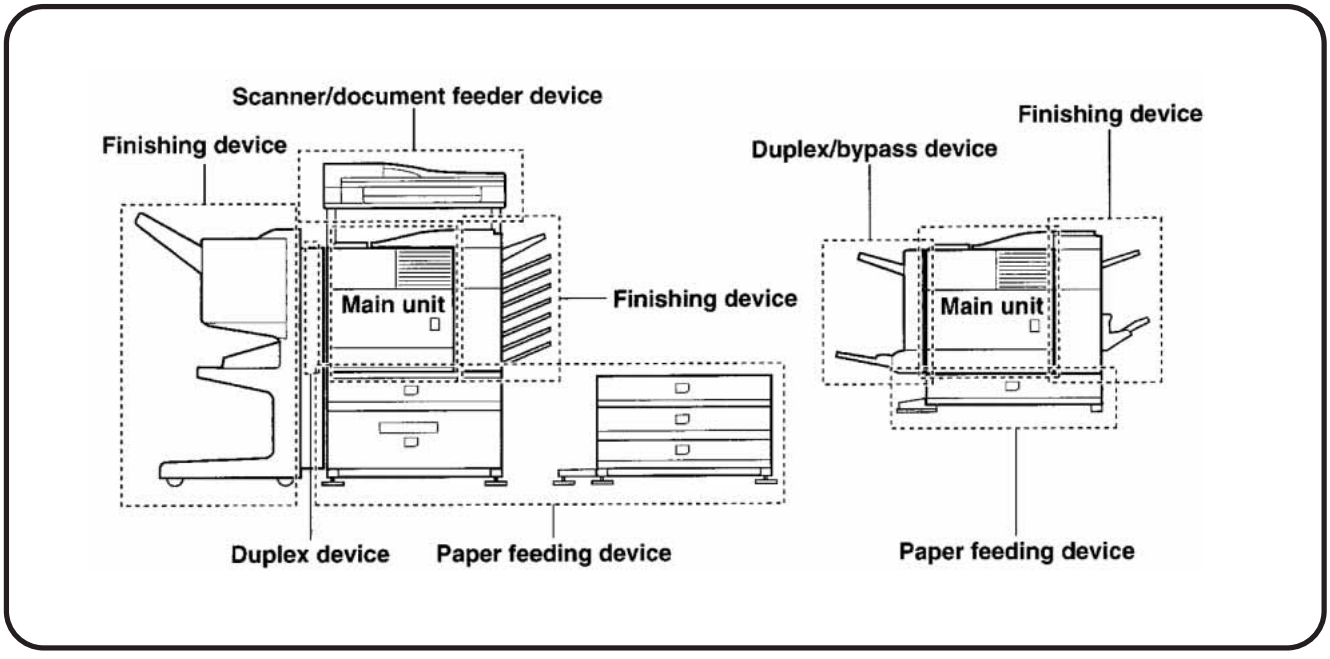
	Code	Function/Operation	Active logic
1	DSW-F	Front door open/close detection	H= Door open
2	DSW-L	Left door open/close detection	H=Door open
3	POD1	Paper exit detection	L= Paper detection
4	POD2	Paper exit detection	L= Paper detection
5	POD3	Paper exit detection	L= Paper detection
6	PPD1	Paper transport detection	L= Paper detection
7	TCS	Toner concentration sensor	
8	TUD	Paper feed cassette upper limit detection	H= Upper limit detection
9	PED	Paper feed cassette paper empty detection	L= Paper empty detection
10	MAIN SW	Power switch	

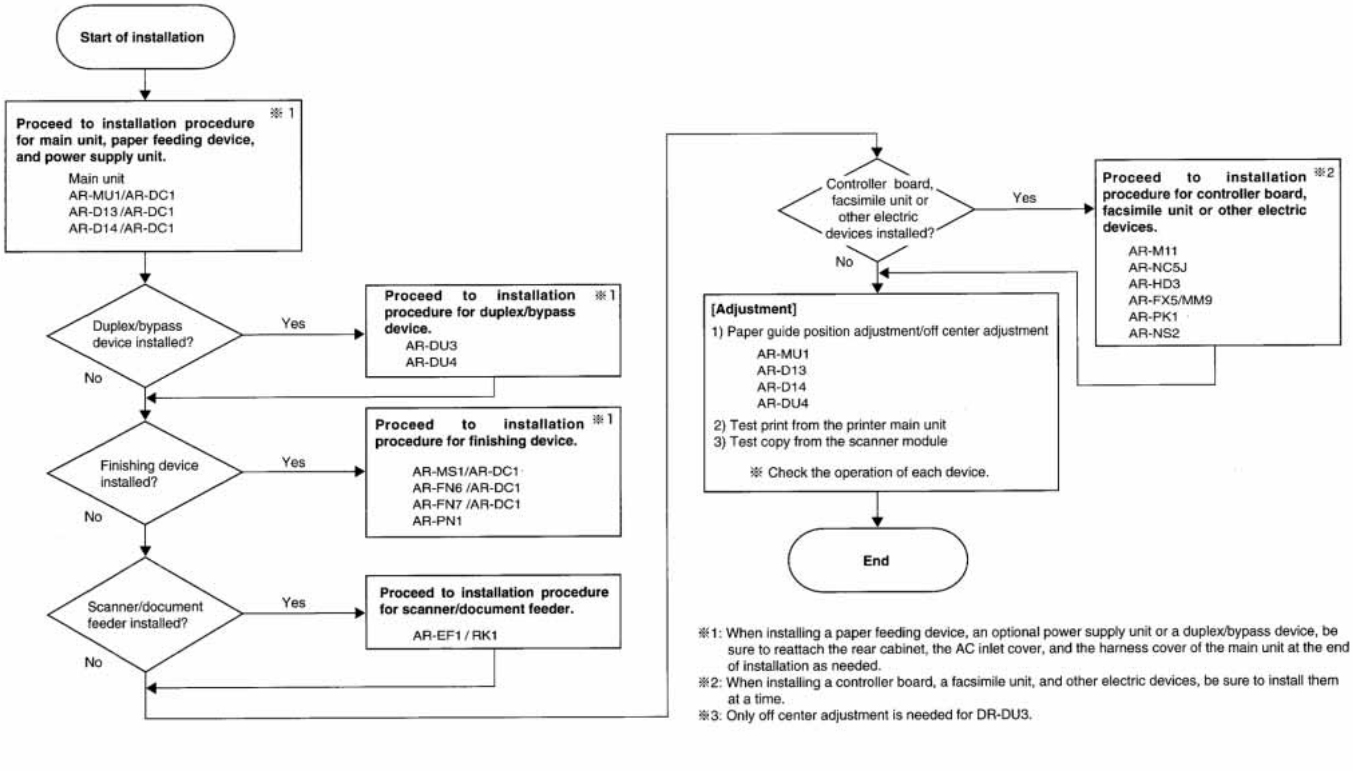
[6] UNPACKING AND INSTALLATION

1. Installing procedure flowchart

There are many combinations between this machine and option units. For installing option units, observe the following procedures for efficiency.

To install the devices effciently, follow the procedure below.
Some peripheral devices may have been installed as standard devices depending on the main unit model.
Part of descriptions and illustrations may be different.



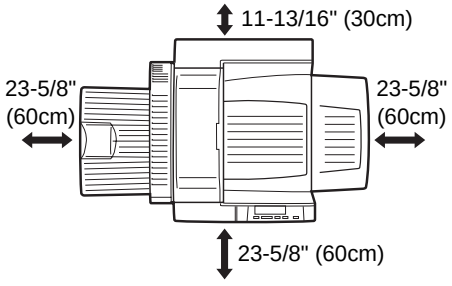

Start of installation
Proceed to installation procedure for main unit, paper feeding device, and power supply unit. ※1
Main unit
AR-MU1/AR-DC1
AR-D13/AR-DC1
AR-D14/AR-DC1
Duplex/bypass device installed?
Yes
No
Proceed to installation procedure for duplex/bypass device. ※1
AR-DU3
AR-DU4
Finishing device installed?
Yes
No
Proceed to installation procedure for finishing device. ※1
AR-MS1/AR-DC1
AR-FN6/AR-DC1
AR-FN7/AR-DC1
AR-PN1
Scanner/document feeder installed?
Yes
No
Proceed to installation procedure for scanner/document feeder.
AR-EF1/RK1
Controller board, facsimile unit or other electric devices installed?
Yes
No
Proceed to installation procedure for controller board, facsimile unit or other electric devices. ※2
AR-M11
AR-NC5J
AR-HD3
AR-FX5/MM9
AR-PK1
AR-NS2
[Adjustment]
1) Paper guide position adjustment/off center adjustment
AR-MU1
AR-D13
AR-D14
AR-DU4
2) Test print from the printer main unit
3) Test copy from the scanner module
※ Check the operation of each device.
End
※1: When installing a paper feeding device, an optional power supply unit or a duplex/bypass device, be sure to reattach the rear cabinet, the AC inlet cover, and the harness cover of the main unit at the end of installation as needed.
※2: When installing a controller board, a facsimile unit, and other electric devices, be sure to install them at a time.
※3: Only off center adjustment is needed for DR-DU3.

* For installation of an option unit, refer to the Service Manual of the option unit.

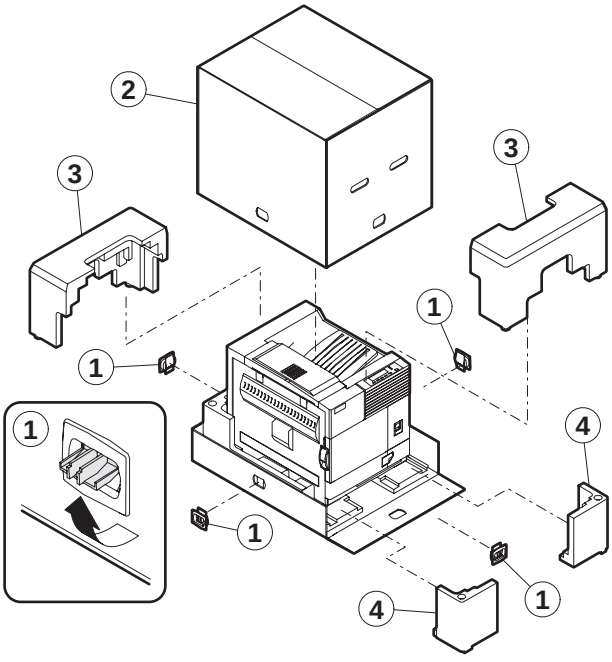
2. Note for installation place

Improper installation may damage this product. Please note the following during initial installation and whenever the machine is moved.

1) The machine should be installed near an accessible power outlet for easy connection.
2) Be sure to connect the power cord only to a power outlet that meets the specified voltage and current requirements. Also make certain the outlet is properly grounded.
   •For the power supply requirements, see the name plate of the main unit.
3) Do not install your machine in areas that are:
   •damp, humid, or very dusty
   •exposed to direct sunlight
   •poorly ventilated
   •subject to extreme temperature or humidity changes, e.g., near an air conditioner or heater.
4) Be sure to allow the required space around the machine for servicing and proper ventilation.



3.Unpacking procedure



Check the following items are included in the package.

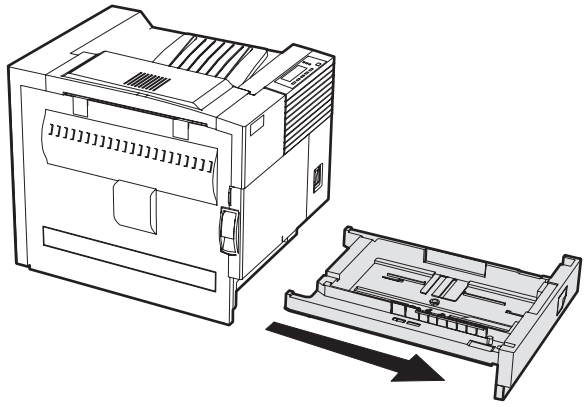
Dust cover	
Magnification ratio table	
Paper size indication seal	
Developer	
Toner bottle for installation	
CD-ROM for AR-350/450 series printers	
Operating Manual	
Counter kit contract	

4. Machine installing procedure

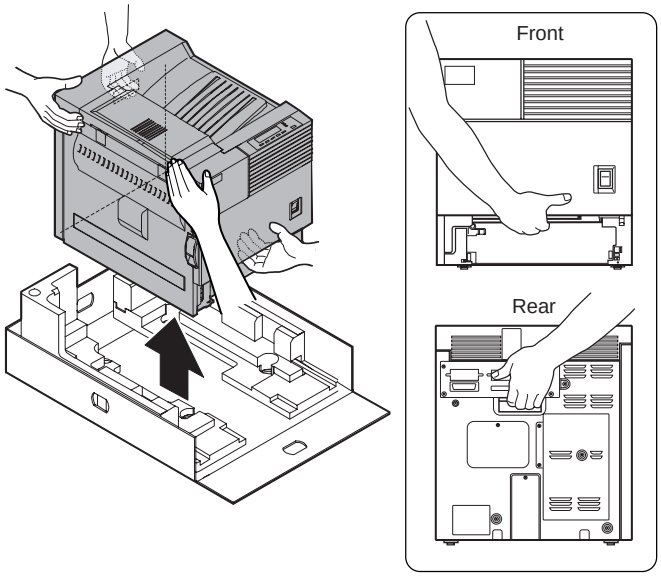
Note: In advance to installation of the machine, the paper feed option units (AR-MU1, AR-D13 or AR-D14) should have been installed.

A. Removal of the machine

1) Pull out the front tray and remove it from the machine.



2) Hold the machine with your both hands and remove it from the package box s shown in the figure.

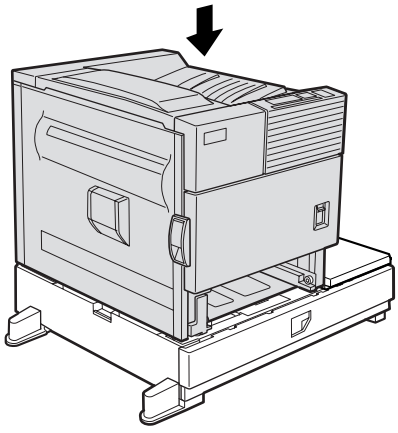


Note: The center of gravity of the machine lies in the left side when viewed from the machine. When lifting the machine, be careful not to drop.

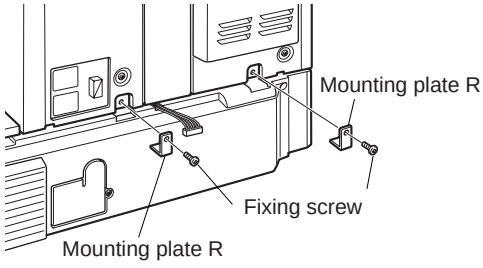
B. Installation of paper feed options to the machine

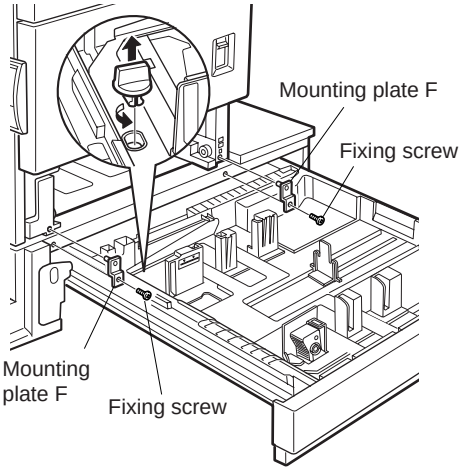
Note: Before use of this machine, one of the paper feed option units (AR-D13/AR-D14/AR-MU1) should be installed to the machine for safety reasons.
Refer to the drawing of the AR-MU1 in this manual.

1) Put the machine on the previously installed option unit.
Be sure to check that the boss of the option unit is securely engaged with the machine and that the external lines (front and left sides) of the option unit and those of the machine are aligned completely.



2) Connect the machine with the option unit.





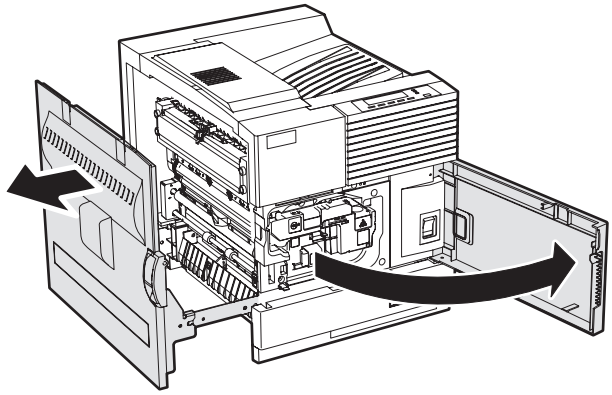
3) Install the option power source (AR-DC1).

* For necessity of installation, refer to the option combination.

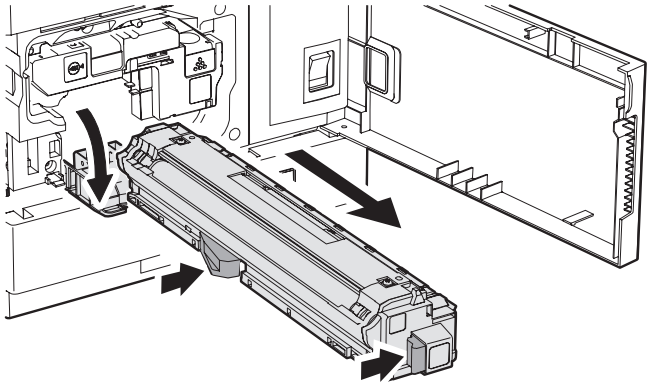
* For the installing procedure, refer to the AR-DC1 Service Manual.

C. Setting related to process

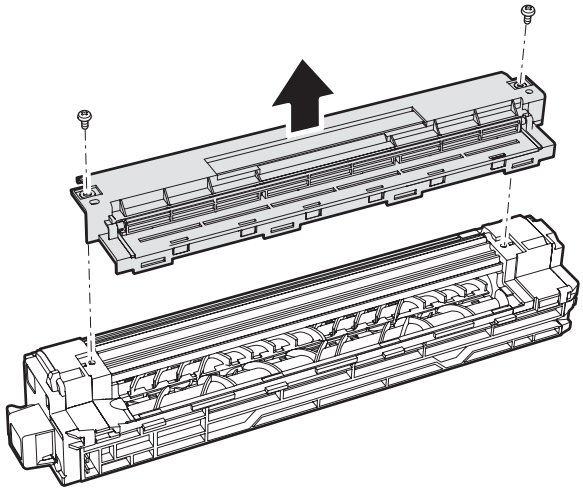
1) Open he left door and the front door.



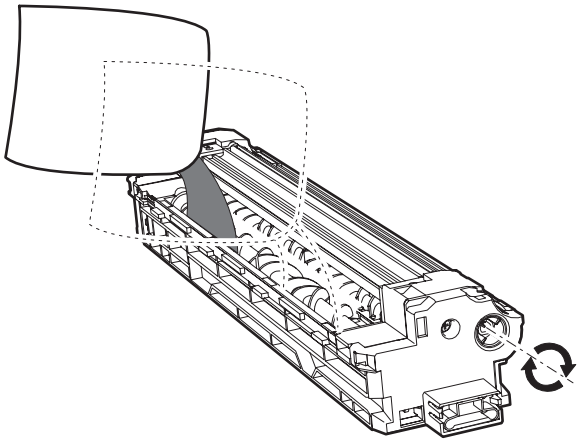
2) Remove the developer cartridge from the machine.



3) Remove the top cover of the developer cartridge.



4) While rotating the MG roller, supply developer into the developer cartridge evenly.B

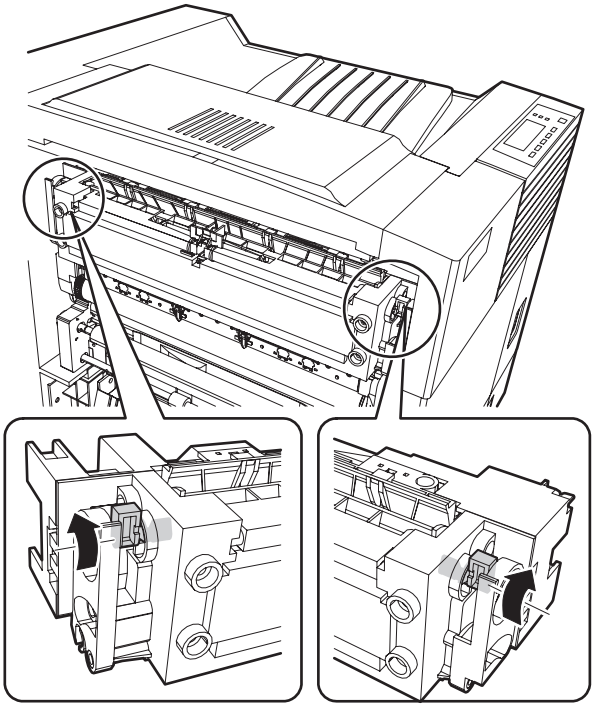


Note: Before opening the developer seal, shake it 4 or 5 times.

5) Attach the top cover to the developer cartridge and install the cartridge to the machine.

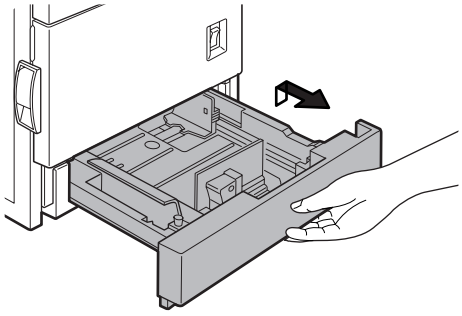
D. Setting related to fusing

1) Put down the right and the left levers of the fusing unit in the arrow direction.

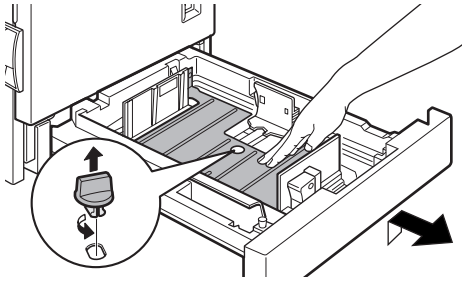


E. Paper setting

1) Pull out the first stage paper feed tray.



2) While pressing the paper holding plate, remove the fixing pin.



3) Put paper in the tray, and close the paper feed tray.

F. Automatic developer adjustment

1) Attach the cabinets which were removed.
2) Close the left door and the front door.
3) Insert the power plug into the power outlet.
4) While pressing the [MENU] key and the [OK] key, turn on the power switch, and the machine will enter the diag mode.
5) On the operation menu, select "AUTOMATIC DV AD."

(LCD Display)

```
AUTOMATIC DV ADJ.
                128
```

6) Press the [OK] key, and the automatic developer adjustment will be performed.
   During execution of the automatic developer adjustment, the data (LED) blinks and the LCD indicates the toner sensor value.
7) After about 2 min, the adjustment value is stored in the machine. Check that the mode was normally completed.
   Normal end: The data LED goes off.
   Abnormal end: The error LED lights up.
   Remove the cause of the error, and execute the automatic developer adjustment again.
8) Press the [BACK/C] key, and the machine returns to the normal mode and enters the warm-p mode.

G. Print test

1) Press the [MENU] key to display "USER SETTING."
2) Press the [OK] key to select the menu.
3) Use [▲] and [▼] keys to select List Print, and print the user setup list to check the print quality.
4) Press the [MENU] key again to return to the normal menu.

5. Option expansion memory installation

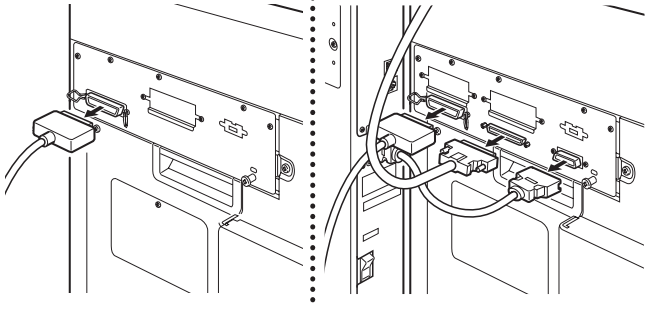
A. Hard disk (ARHD3), PS3 Expansion kit (ARPK1), print server card (AR-NC5J), expansion memory (commercially available one)

Note: Before performing this installation work, check that the data lamp on the operation panel is neither lighting nor blinking.

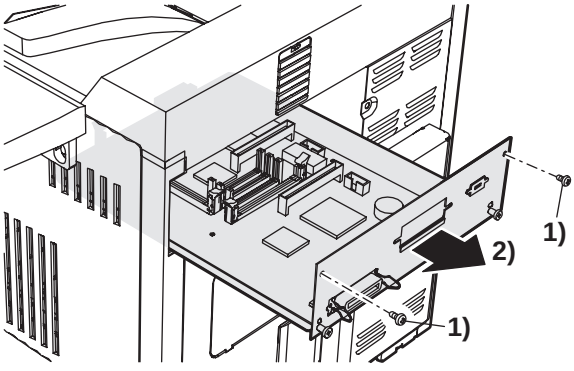
1) Turn off the power of the machine and disconnect the power plug from the power outlet.

2) Remove all the cables (such as printer cables) from the control PWB.

★ In the case of the printer control PWB ★ In the case of the MFP control PWB

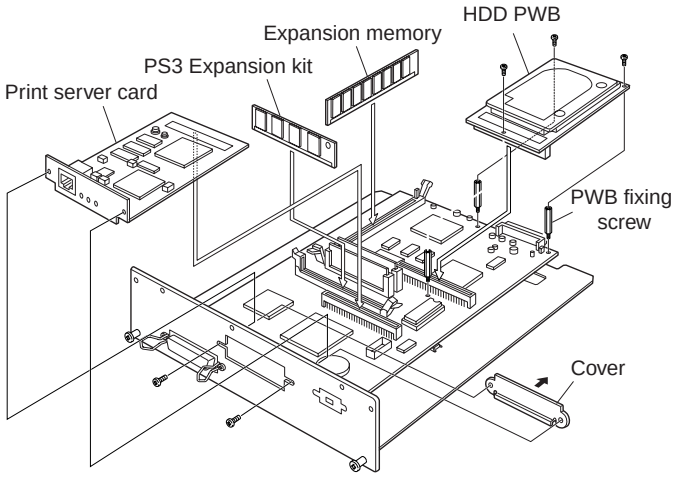


3) Remove the control PWB.



4) Install each option.

<Printer model>



Note: To prevent breakage by static electricity, take the following measures.

a. Use an earth band for installing procedures.

b. Keep the memory in the protection bag, and remove it from the bag only just before installation.

5) Install the control PWB to the machine.

6) Attach the cables which were removed before installation of the memory.

7) Insert the power plug into the power outlet, and turn on the power.

B. Print test

1) Press the [MENU] key to display "USER SETTING."

2) Press the [OK] key to select the menu.

3) Use [▲] and [▼] keys to select List Print, and print the setup list or demonstration page to check the print quality.

4) Press the [MENU] key again to return to the normal menu.

C. Other options

For installation of the other options, refer to the Service Manual of each option.

[7] DISASSEMBLY AND ASSEMBLY, MAINTENANCE

1.Maintenance System Table

A. Engine section

Maintenance cycle : 50K

× Check (Clean, replace, or adjust as necessary.)　○ Clean　▲ Replace　△ Adjust　☆ Lubricate　□ Move position

Unit name	Part name	When calling	50K	100K	150K	200K	250K	300K	350K	400K	Remark
Drum peripheral	Drum		▲	▲	▲	▲	▲	▲	▲	▲	Installed when shipping
	Cleaner blade		▲	▲	▲	▲	▲	▲	▲	▲	
	Toner reception seal		▲	▲	▲	▲	▲	▲	▲	▲	
	Side molt		▲	▲	▲	▲	▲	▲	▲	▲	
	Transfer roller	×	×	▲	×	▲	×	▲	×	▲	
	Discharge plate	×	×	▲	×	▲	×	▲	×	▲	
	TR bearing (F/R)			×		×		×		▲	
	Transfer roller collar			×		×		×		▲	
	TR gear	×	×	×	×	▲	×	×	×	▲	
	Screen grid	(○)×	▲	▲	▲	▲	▲	▲	▲	▲	
	Drum separation pawl UN		▲	▲	▲	▲	▲	▲	▲	▲	
	Charger case (M/C)		○	○	○	○	○	○	○	○	
	Charging plate (saw teeth)	(○)×	▲	▲	▲	▲	▲	▲	▲	▲	
Developing section	Developer		×	▲	×	▲	×	▲	×	▲	Supplied when installing
	DV blade		×	▲	×	▲	×	▲	×	▲	
	DSD collar		○	○	○	○	○	○	○	○	
	DV side seal F		×	▲	×	▲	×	▲	×	▲	
	DV side seal R		×	▲	×	▲	×	▲	×	▲	
	Toner cartridge										Attached when installing./ EX Japan: 814g, user replacement for every 30K.
Fusing section	Upper heat roller		○	○	○	▲	○	○	○	▲	
	Lower heat roller		○	○	○	▲	○	○	○	▲	
	Upper separation pawl		×	×	×	▲	×	×	×	▲	
	Lower separation pawl		×	×	×	▲	×	×	×	▲	
	Thermistor		○	×	○	×	○	×	○	×	Clean and remove paper dust.
	Upper heat roller gear		×	×	×	▲	×	×	×	▲	
	Paper guides	○	○	○	○	○	○	○	○	○	
	Gears		☆	☆	☆	☆	☆	☆	☆	☆	
Filters	Ozone filter			▲		▲		▲		▲	
Paper feed section	Paper feed roller	○	○	×	○	×	○	×	○	×	Note 1
	Torque limiter	×		×		×		×		×	Note 1
Transport section Paper exit reverse section	PS follower roller	○	○	○	○	○	○	○	○	○	
	Transport rollers	○	○	○	○	○	○	○	○	○	
	Transport paper guides	○	○	○	○	○	○	○	○	○	
	Paper dust remover		×	▲	×	▲	×	▲	×	▲	
Drive section	Gears(Specified position)	☆	☆	☆	☆	☆	☆	☆	☆	☆	
	Belts							×			
Image quality		×	×	×	×	×	×	×	×	×	
Other	Sensors			×		×		×		×	

Note 1:Replacement reference: Use the counter value of each paper feed port as the replacement reference.
Paper feed roller/Torque limiter section: 80K or 2 years

B. Peripheral devices

Maintenance cycle : 50K

× Check (Clean, replace, or adjust as necessary.) ○ Clean ▲ Replace △ Adjust ☆ Lubricate □ Move position

Option name	Part name		When calling	50K	100K	150K	200K	250K	300K	350K	400K	Remark
ADU + Manual feed	Paper feed separation section	Paper feed rollers	(○) ×	○	×	○	×	○	×	○	×	Note 3
		Separation pad	(○) ×	○	×	○	×	○	×	○	×	Note 3
		Torque limiter	(○) ×		×		×		×		×	Note 3
	Transport section	Transport rollers	○	○	○	○	○	○	○	○	○	
		Transport paper guides	○	○	○	○	○	○	○	○	○	
	Drive section	Gears	☆		☆		☆		☆		☆	(Specified position)
		Belts							×			
	Other	Sensors	×		×		×		×		×	
Desk (Multi stage LCC) Multi purpose	Paper feed separation section	Paper feed rollers	(○) ×	○	×	○	×	○	×	○	×	Note 3
		Torque limiter	(○) ×		×		×		×		×	Note 3
	Transport section	Transport roller	○	○	○	○	○	○	○	○	○	
		Transport paper guides	○	○	○	○	○	○	○	○	○	
	Drive section	Gears	☆		☆		☆		☆		☆	(Specified position)
		Belts							×			
	Other	Sensors	×		×		×		×		×	
Finisher	Transport section	Transport rollers	○		○		○		○		○	
		De-curler roller	(○) ×	×	○	×	○	×	○	×	○	
		Transport paper guides	○		○		○		○		○	
	Drive section	Gears	☆		☆		☆		☆		☆	(Specified position)
		Belts							×			
	Other	Sensors	×		×		×		×		×	
		Discharge brush	×		×		×		×		×	
	Staple un											Replace UN at 100K staple.
	Staple cartridge											User replacement for every 3000pcs.
Mail-bin stacker	Transport section	Transport roller	○		○		○		○		○	
		Transport paper guides	○		○		○		○		○	
	Drive section	Gears	☆		☆		☆		☆		☆	(Specified position)
		Belts							×			
	Other	Sensors	×		×		×		×		×	
		Discharge brush	×		×		×		×		×	
Saddle finisher	Transport section	Transport roller	○		○		○		○		○	
		Transport paper guides	○		○		○		○		○	
	Drive section	Gears	☆		☆		☆		☆		☆	(Specified position)
		Belts							×			
	Other	Sensors	×		×		×		×		×	
		Discharge brush	×		×		×		×		×	
	Staple UN											Replace UN at 100K staple (including the staple UN and the holder section).
	Staple cartridge											User replacement for every 5000 pcs.

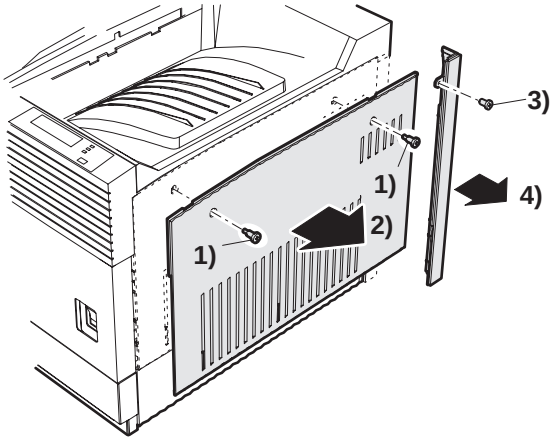
Note 3: Replacement reference: Use the counter value of each paper feed port as the replacement reference.
Paper feed roller/Separation pad/Torque limiter section: 80K or 2 years

2. Disassembly and assembly

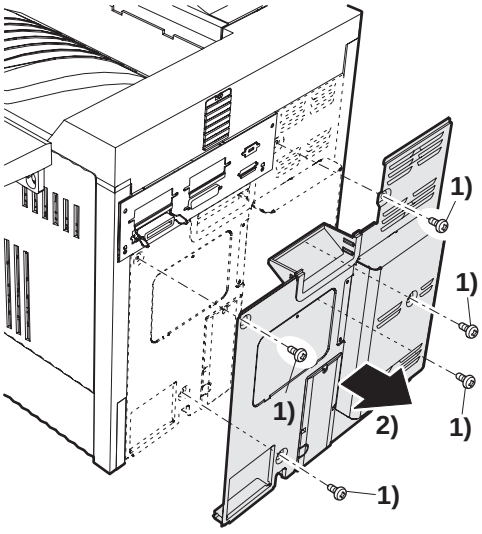
Note:
- When assembling, check that the flat cable and the harness connectors are securely connected.
- When connecting the flat cable, be careful not to break the pins.
- When installing the PWB unit and the memory module, use an earth band to prevent against breakage by static electricity.

A. Exterior

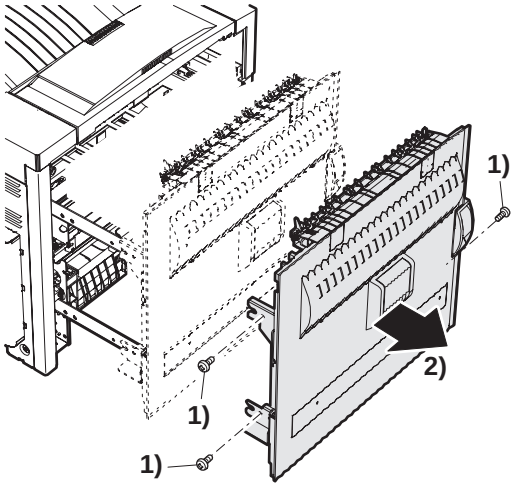
(1) Right cabinet



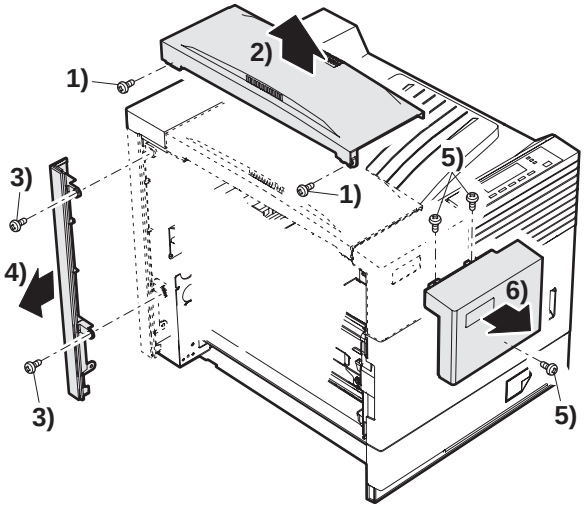
(2) Rear cabinet



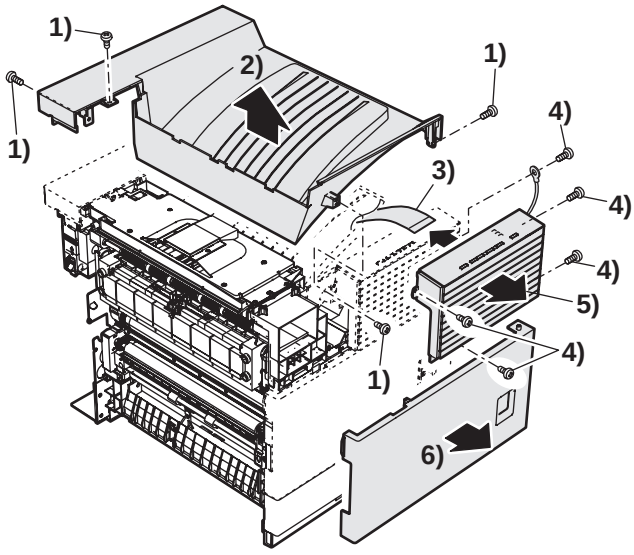
(3) Left door unit



(4) Paper exit upper cabinet/Front left upper cabinet

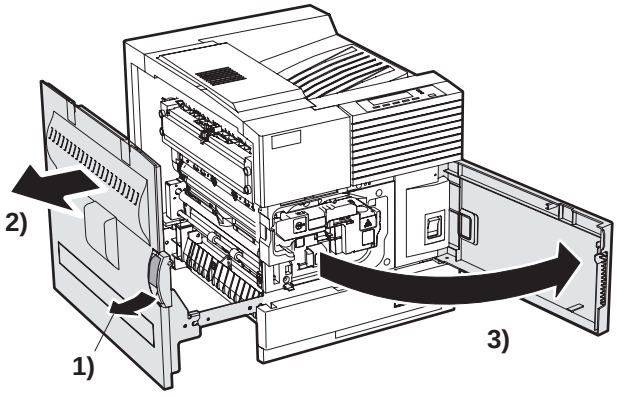


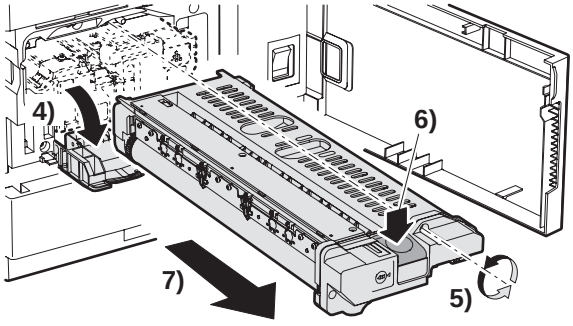
(5) Upper cabinet/Operation panel/Front door



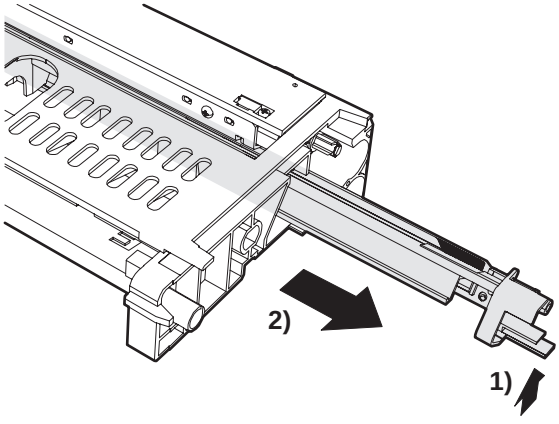
B. Drum peripheral

(1) Drum cartridge

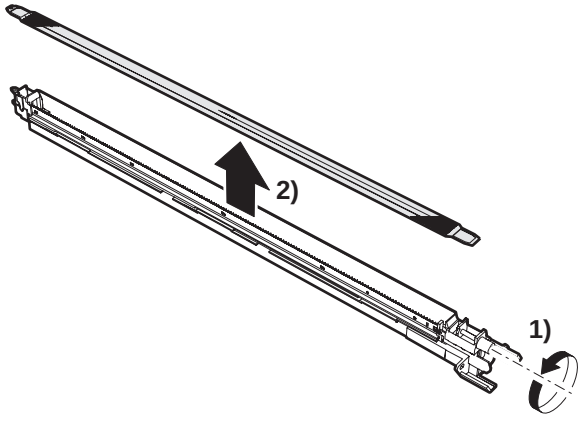




(2)Main charger /charger case

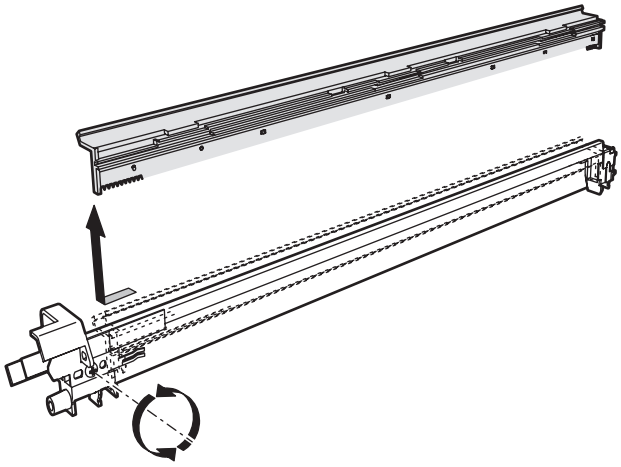


(3) Screen grid

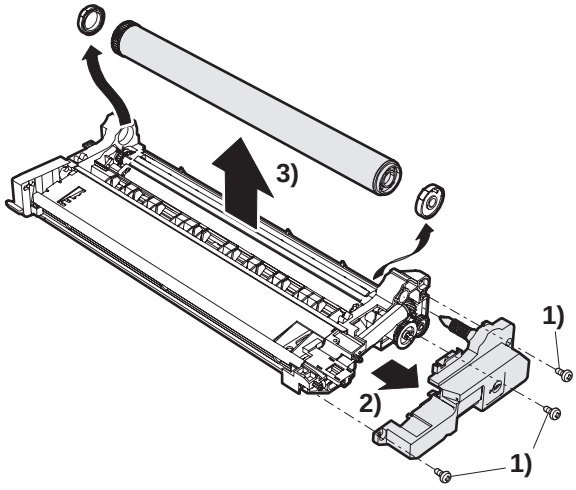


(4) Main charger

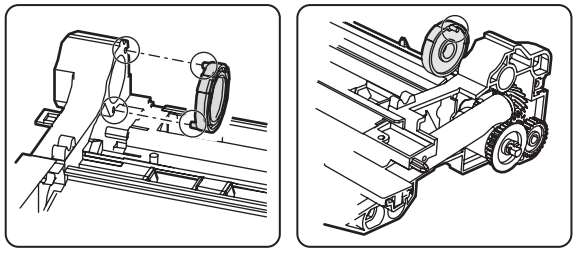
Loosen the screw and remove the charger.



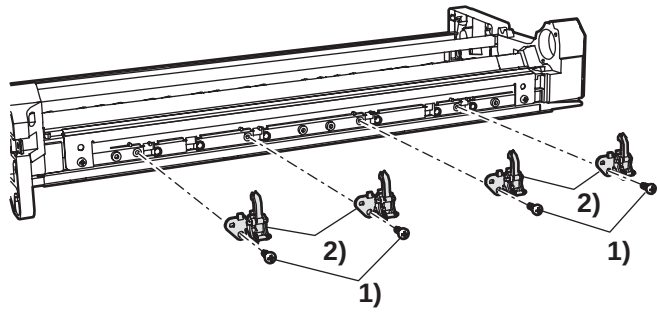
(5)OPC drum/DSD collar

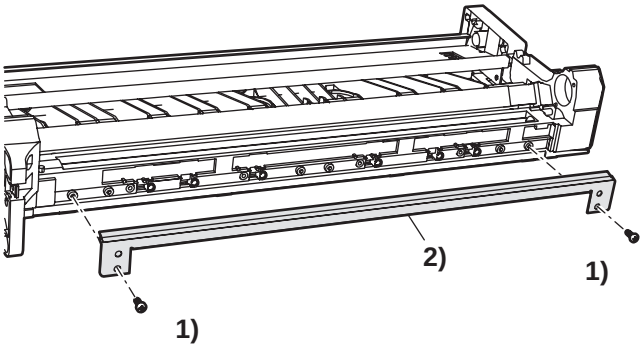


Note: When installing the DSD collar, engage the DSD collar boss with the hole in the drum frame.

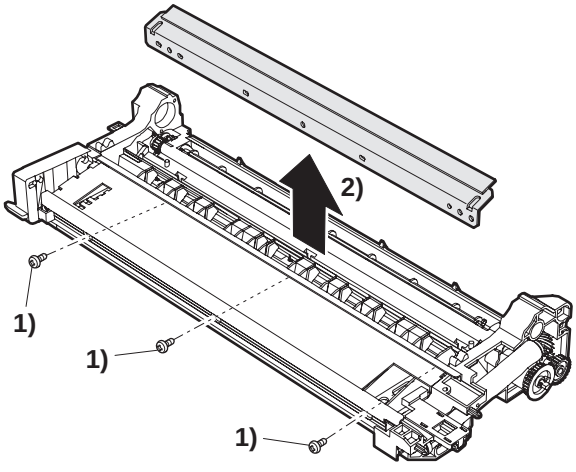


(6) Drum separation pawl

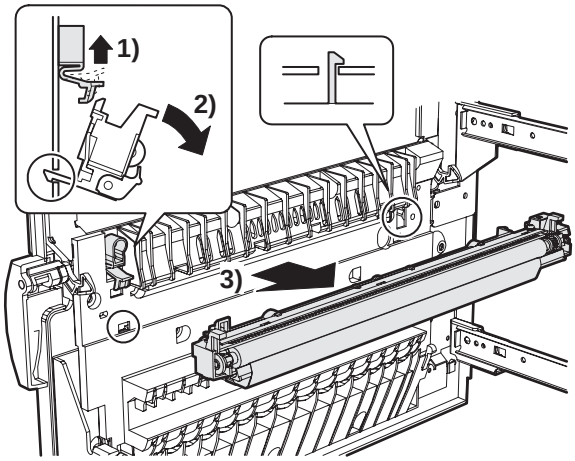




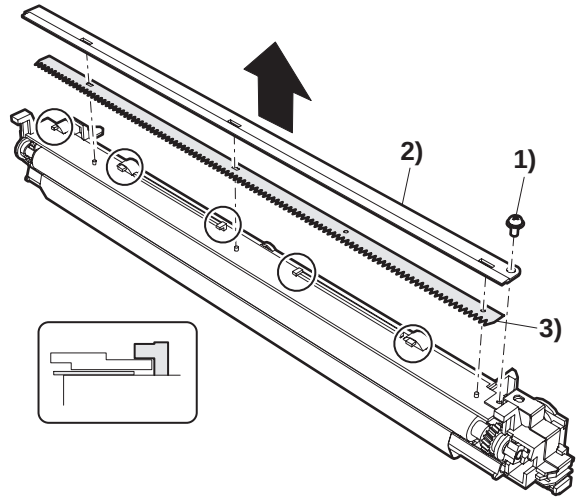
(7)Cleaning blade



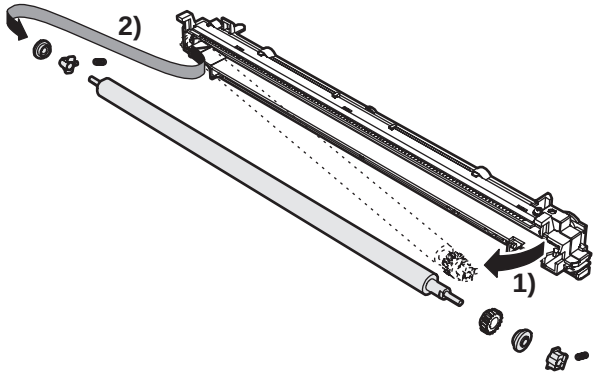
C. Transfer roller unit



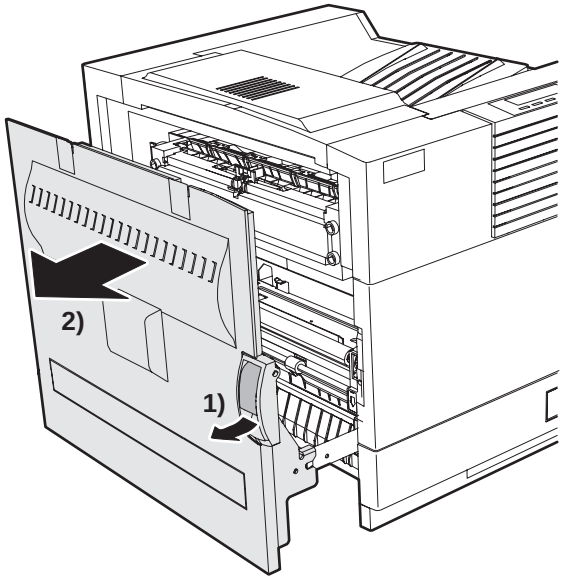
(1) Discharge plate

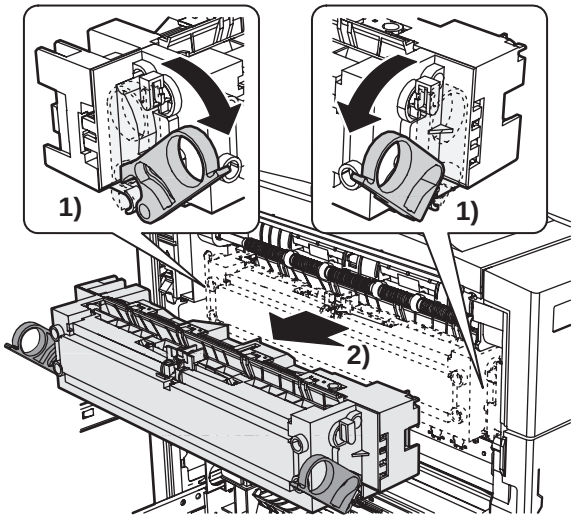


(2) Transfer roller

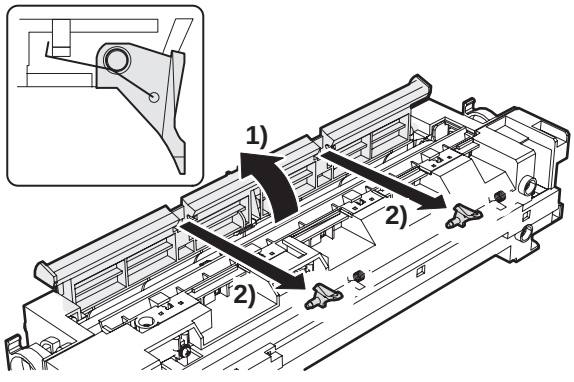


D. Fusing unit

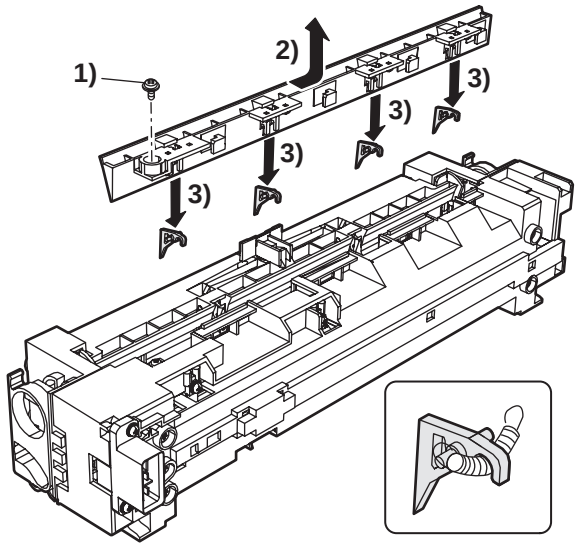




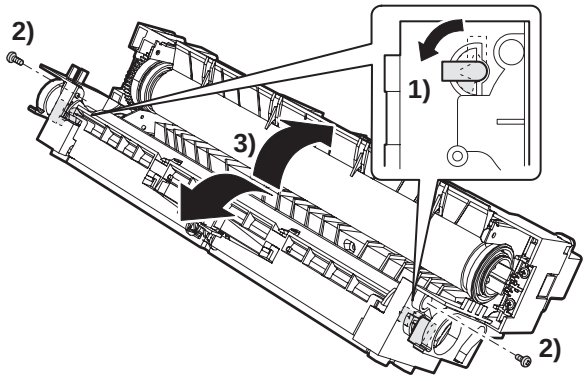
(1)Lower separation pawl

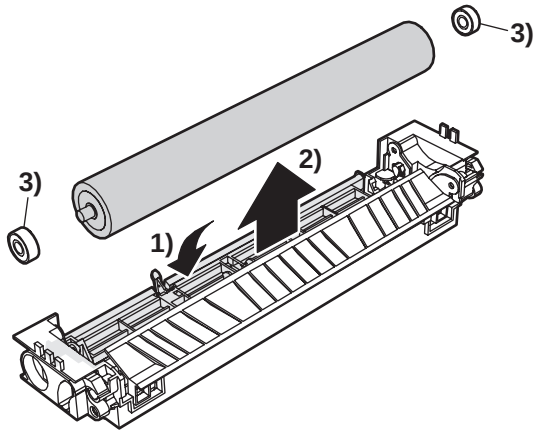


(2)Upper separation pawl

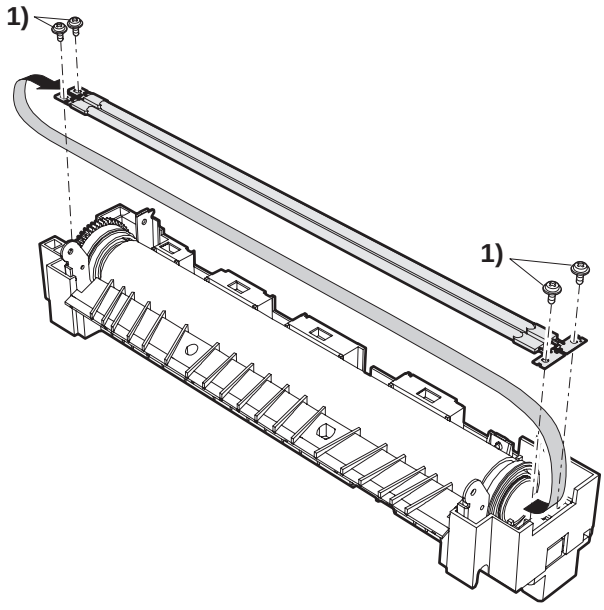


(3) Lower heat roller

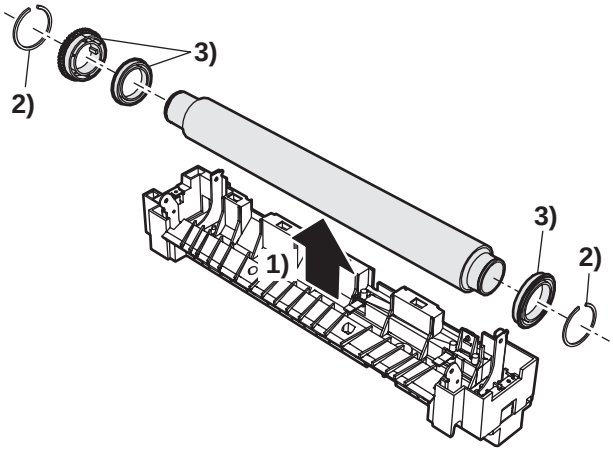




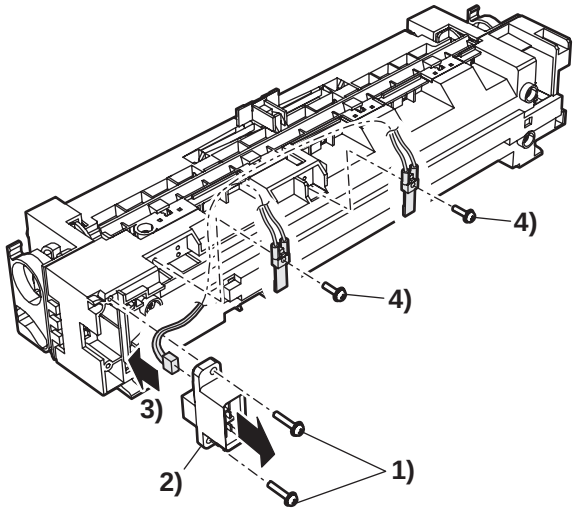
(4)Heater lamp



(5)Upper heat roller

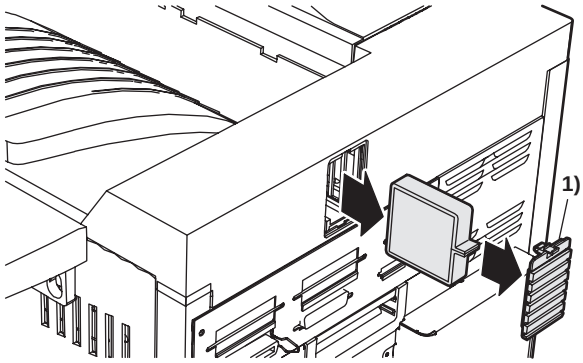


(6)Thermistor



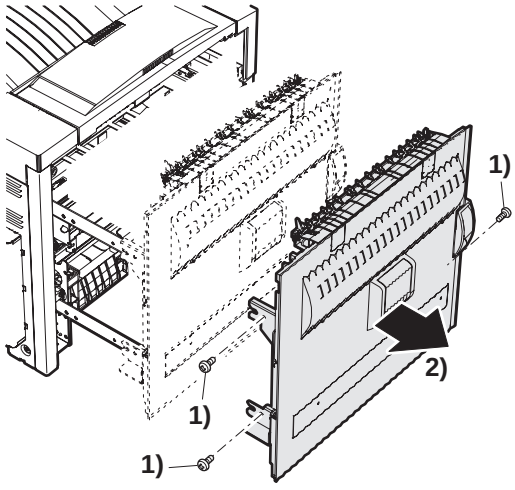
E. Ozone filter

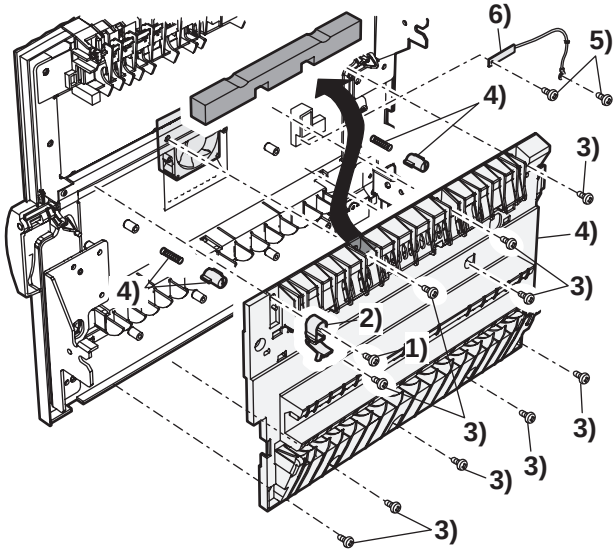
(1)Ozone filter

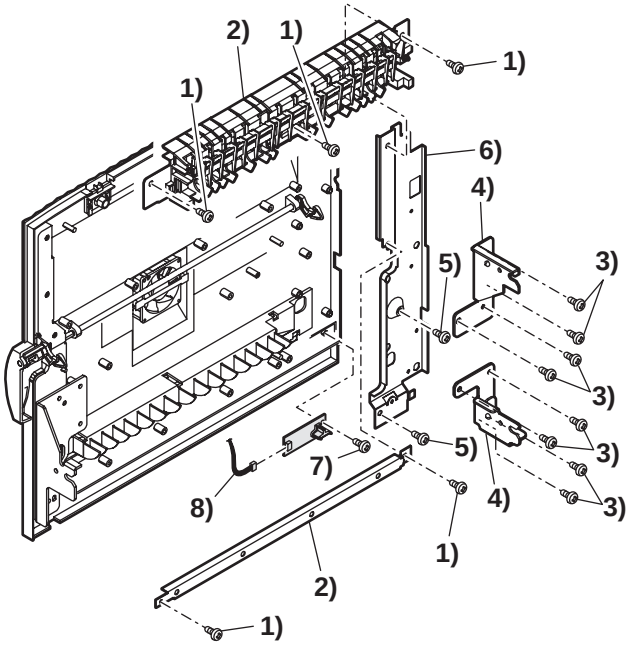


(2)Ozone filter

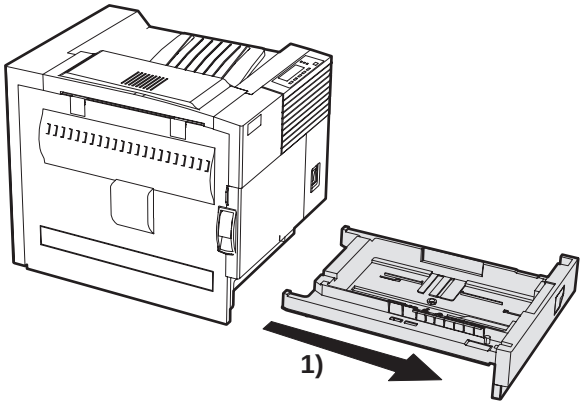
Note: Not subject to maintenance
This part is not included in the counter kit.



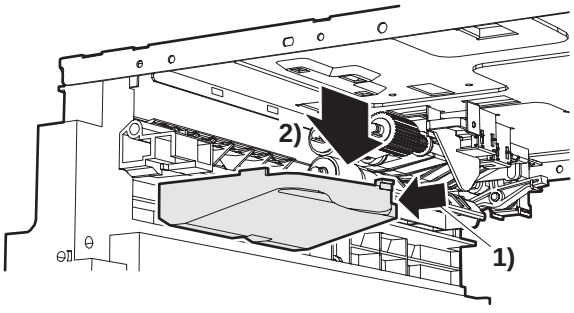




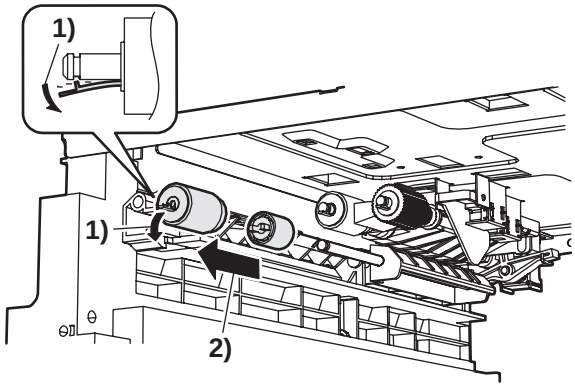
F. Paper feed section



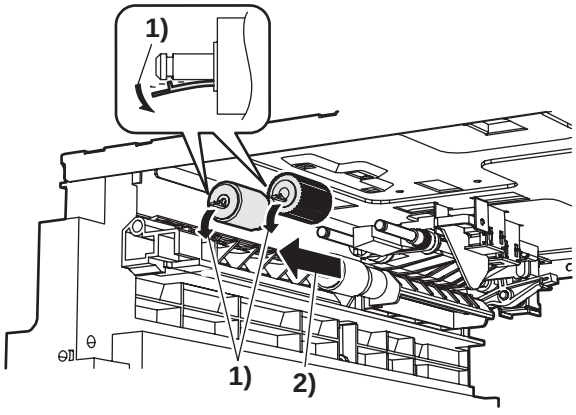
(1)Paper guide



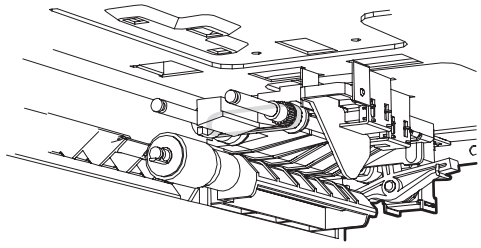
(2)Separation roller/torque limiter



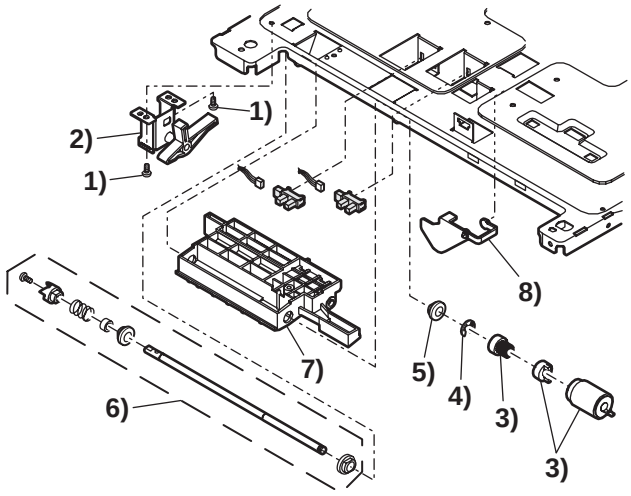
(3)pick-up roller/ paper feed roller



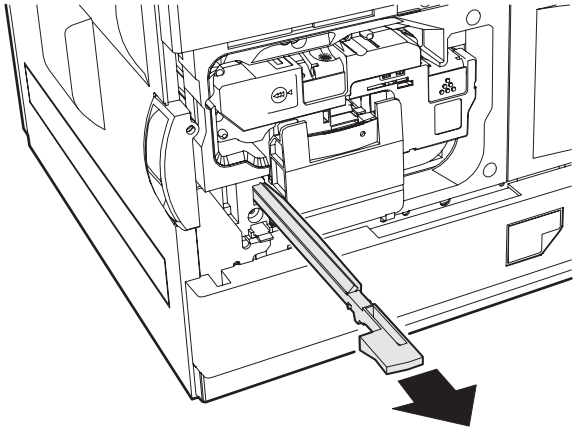
(4)Belt



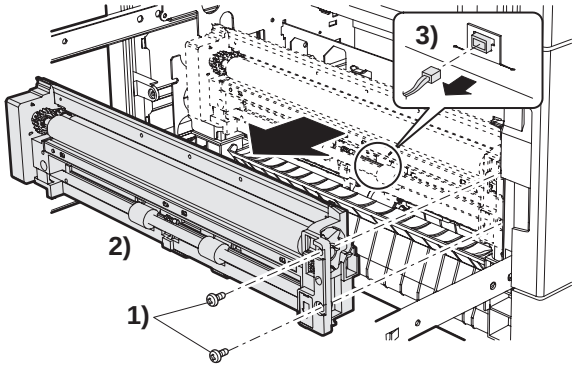
(5)Upper limit sensor/paper empty sensor



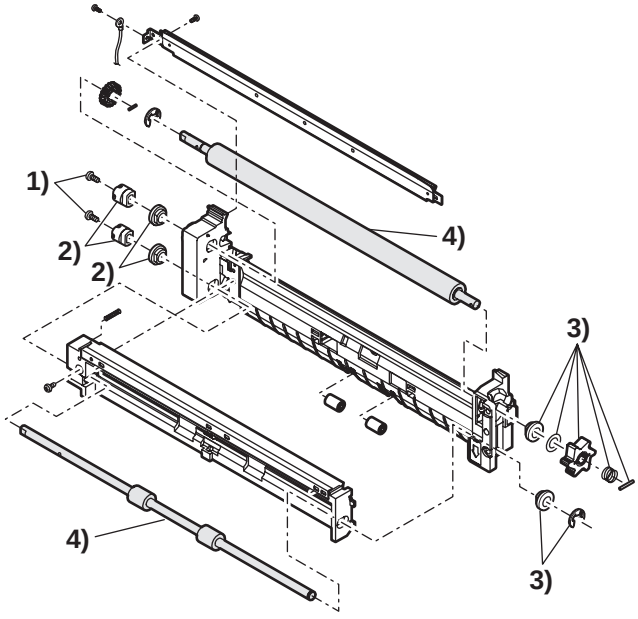
G. Paper dust removing unit



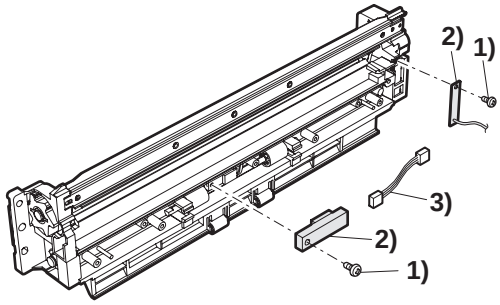
H. Resist roller unit



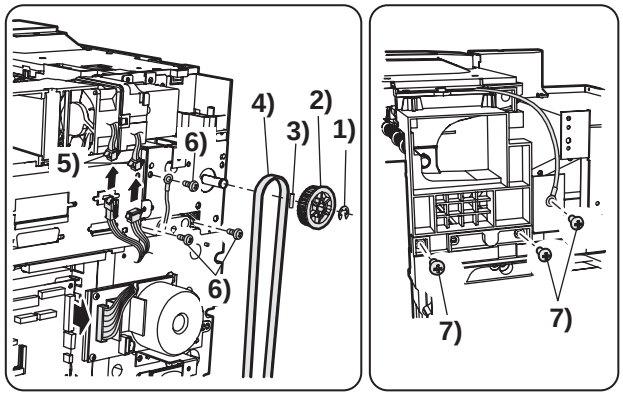
(1) Resist roller

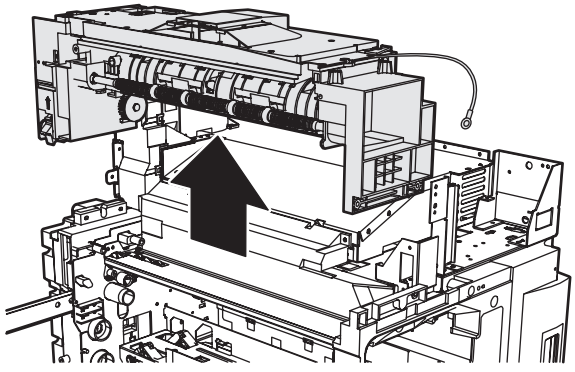


(2) Resist sensor

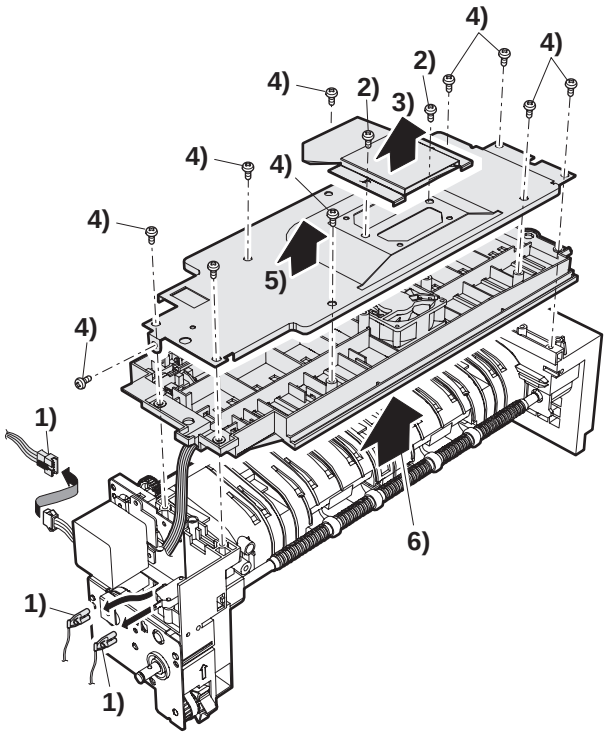


I. Paper exit unit

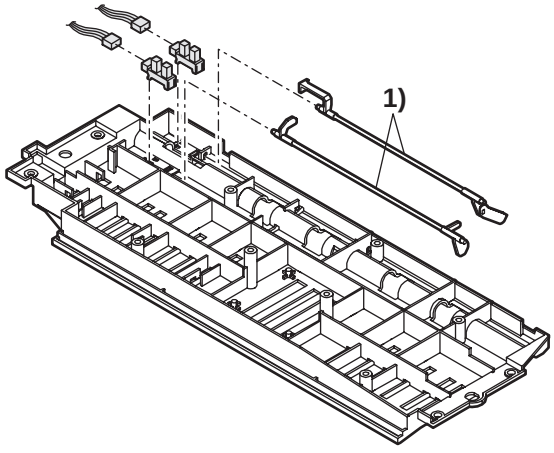




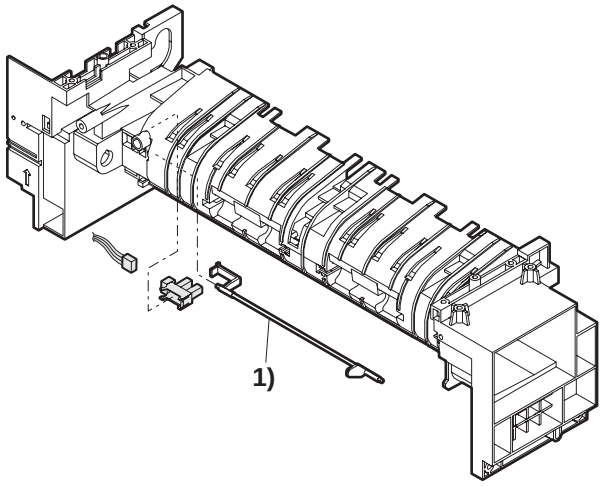
(1)Paper exit upper paper guide unit



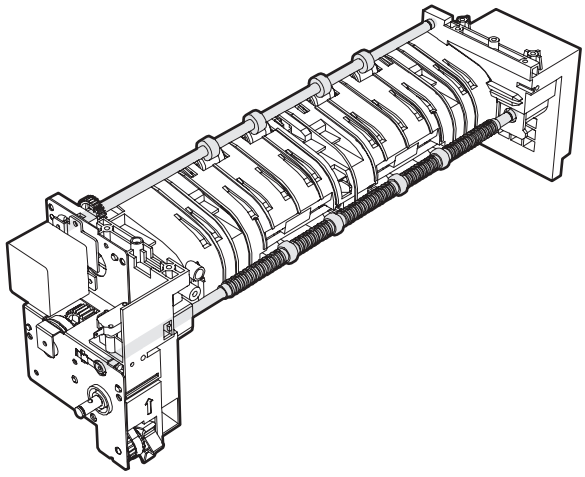
(2)Paper exit sensor/switch-back sensor



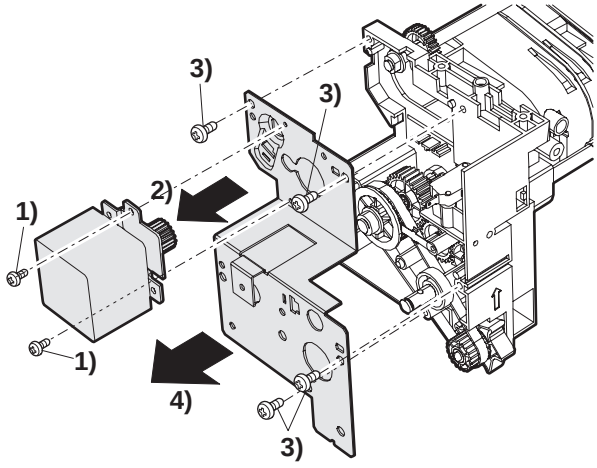
(3)Paper exit sensor 2



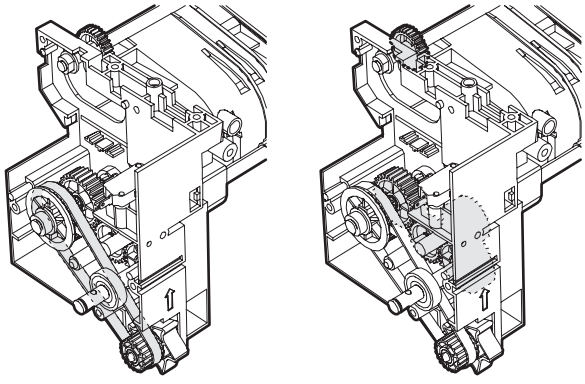
(4)Paper exit roller



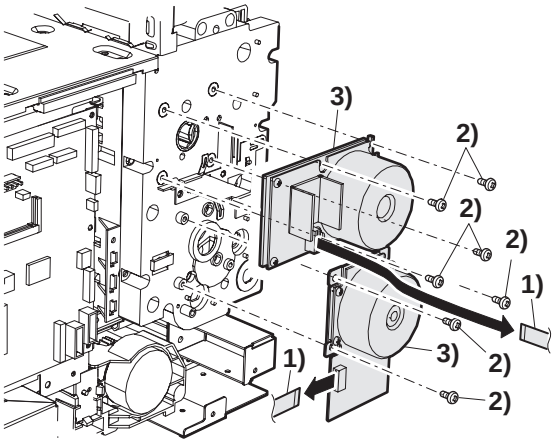
(5)Paper exit motor



(6)Paper exit drive section

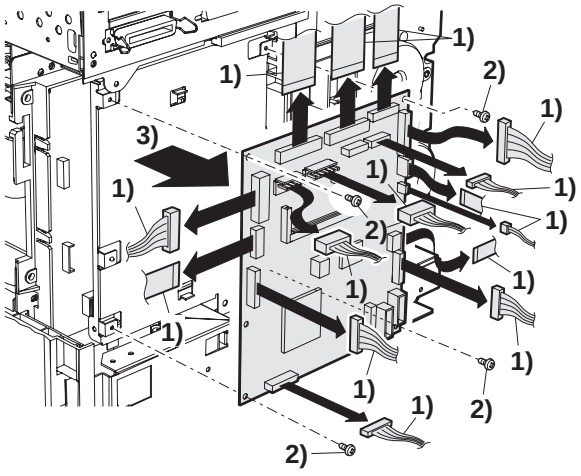


J. Main motor/drum motor

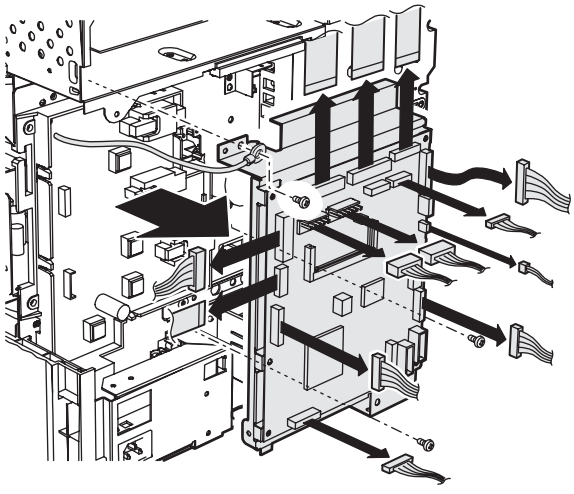


K. PCU PWB

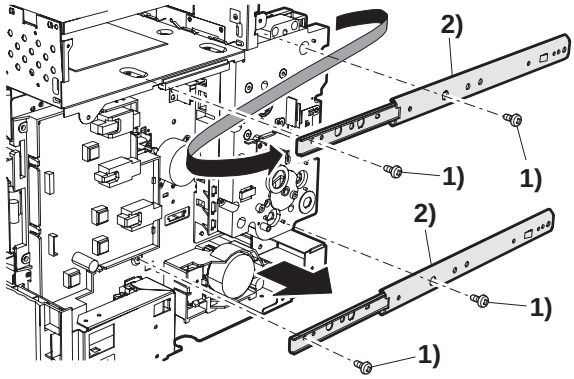
Note: When replacing the PCU PWB, remove the EEPROM from the PCU PWB and install it to a new PWB.

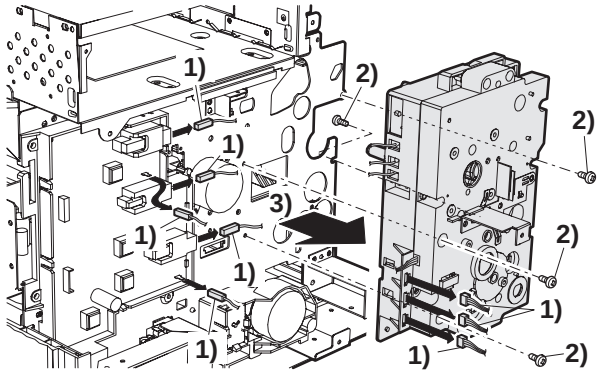


L. PCU PWB base plate unit

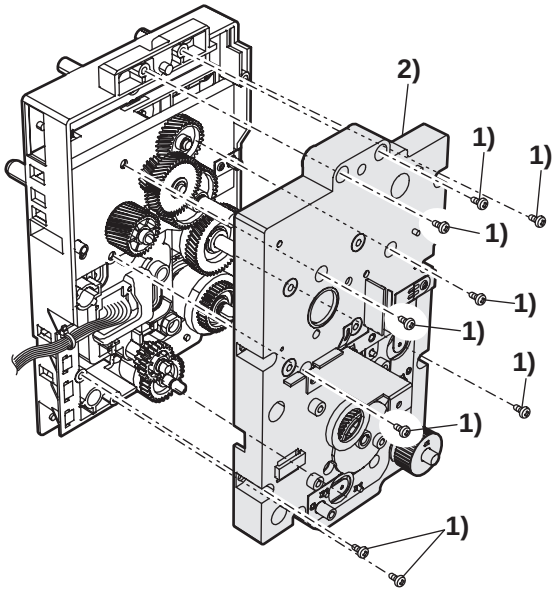


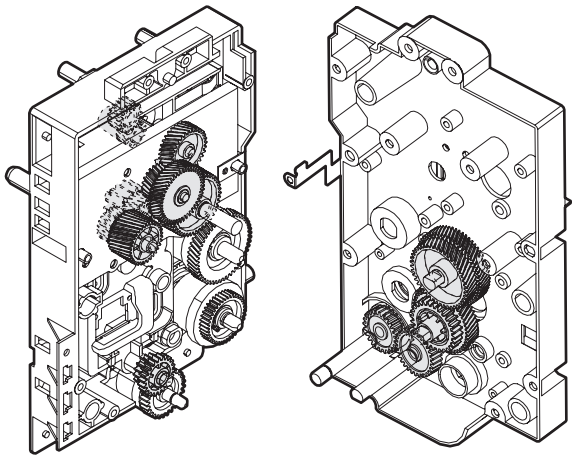
M. Main drive unit

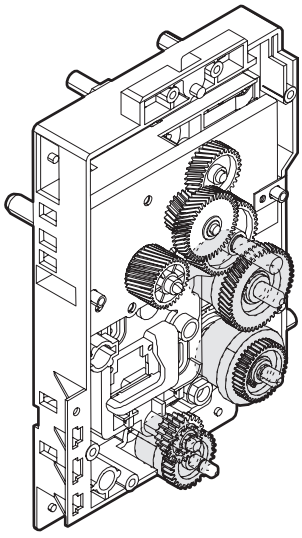




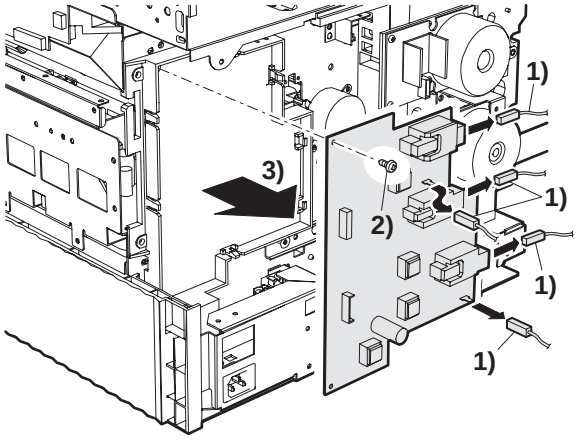
(1)Drive gear/clutch



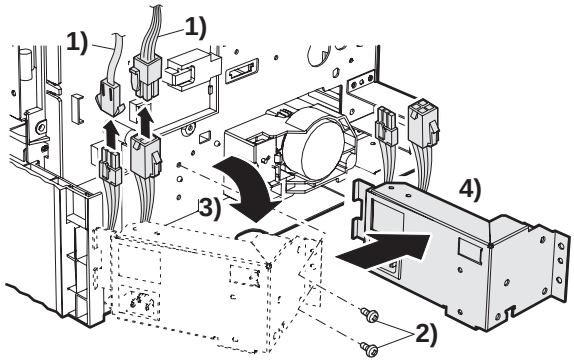


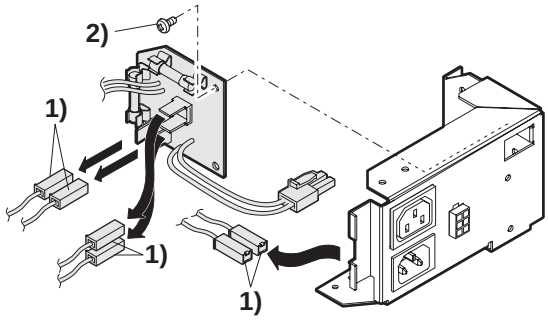


N. High voltage PWB



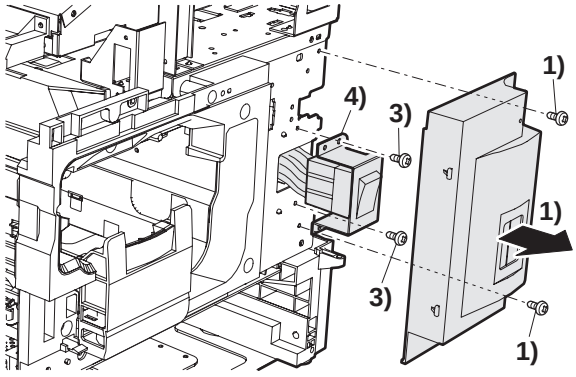
O. Fuse PWB



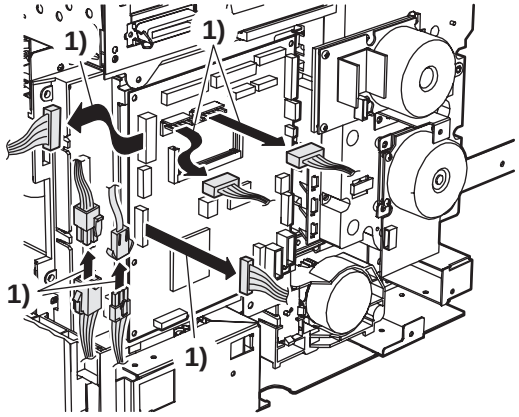


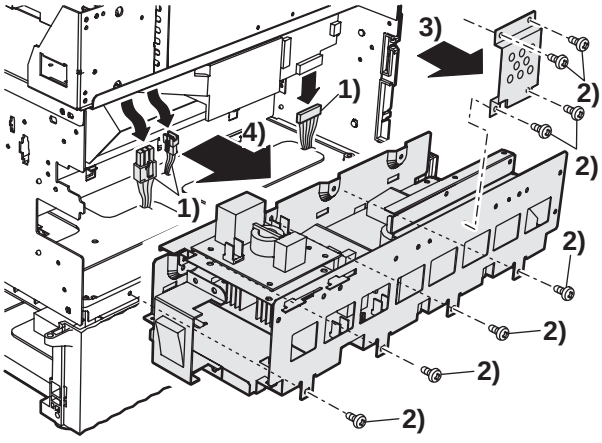
P. Power unit peripheral

(1)Power switch

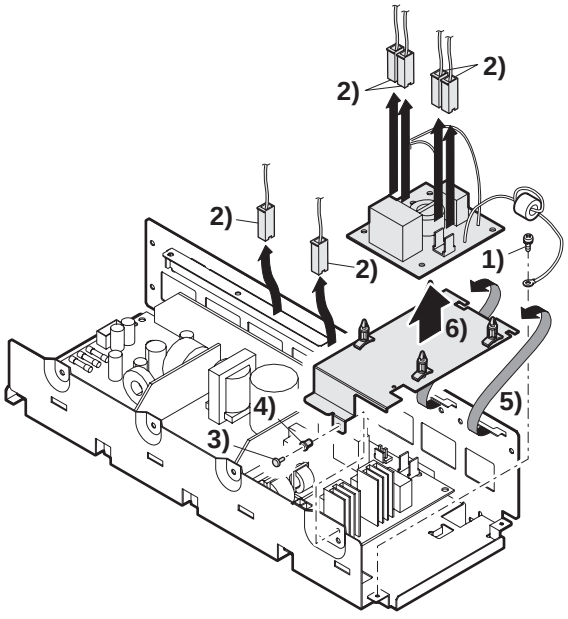


(2)Power unit

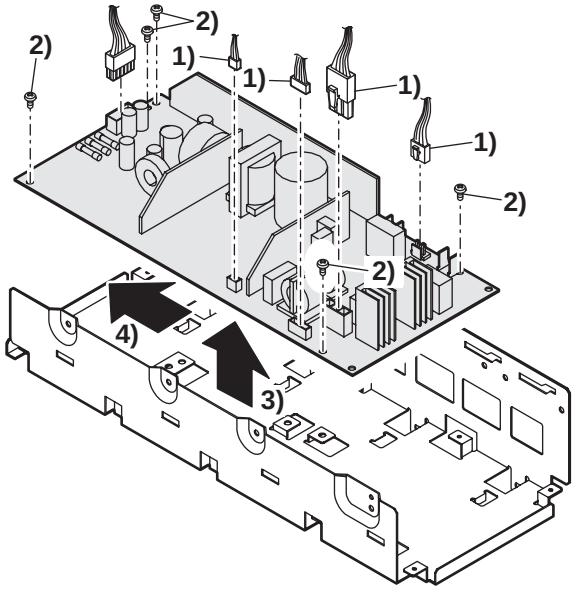




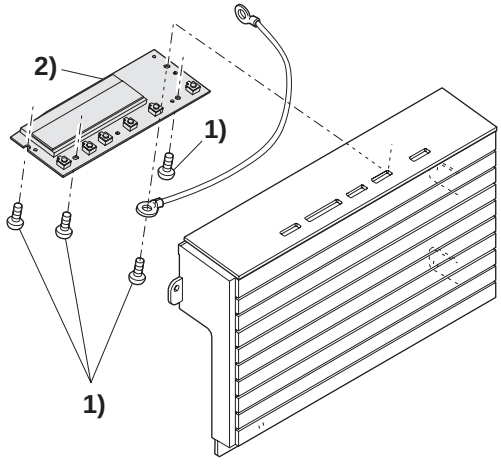
(3) Filter PWB



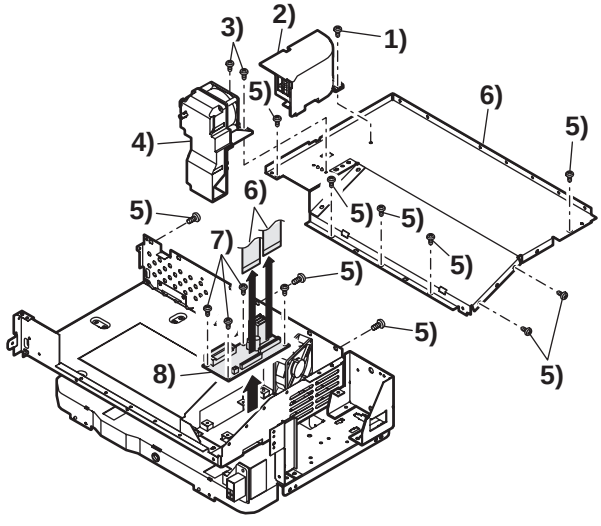
(4) Power PWB



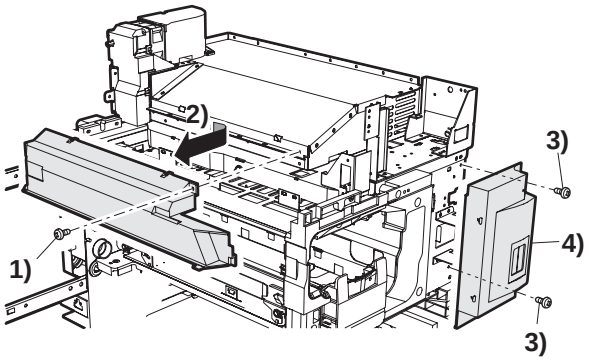
Q. Printer operation PWB

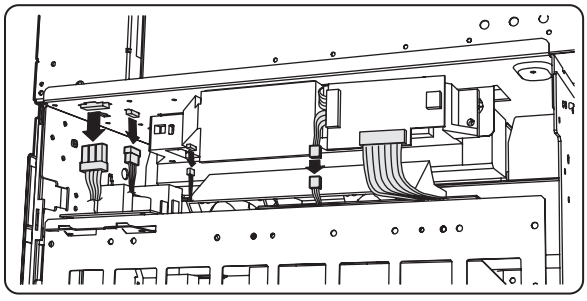


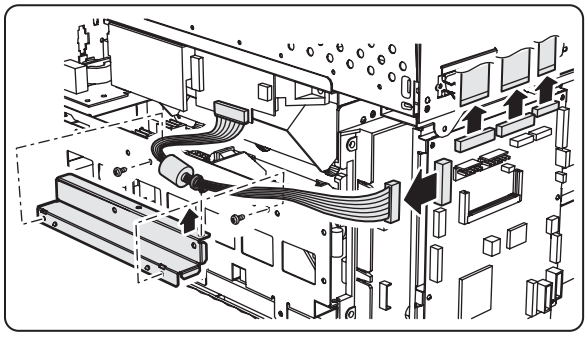
R. Mother PWB

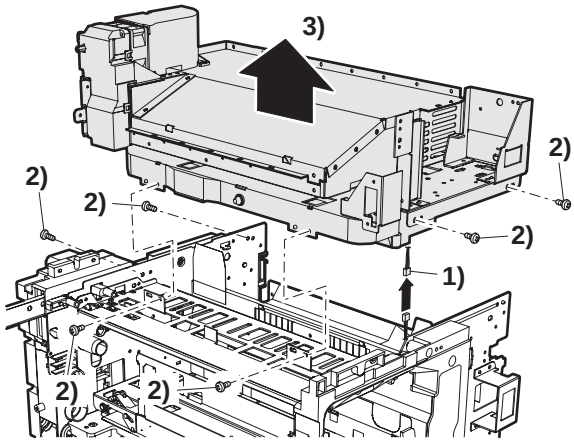


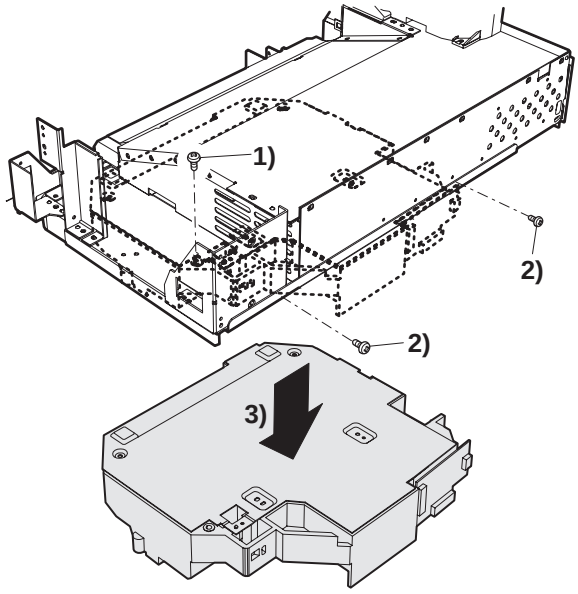
S. Laser unit





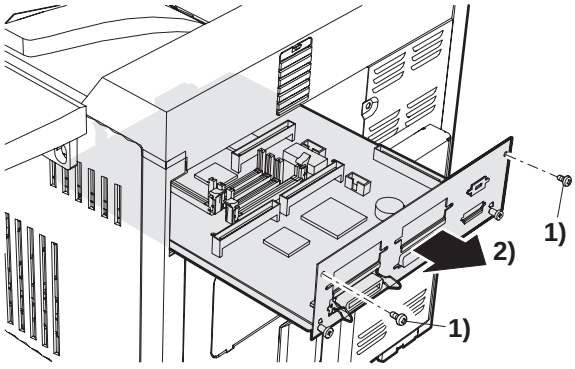






Note: When the LSU is disassembled, the LSU right angle adjustment is required.

T. Controller PWB



[8] MACHINE OPERATION

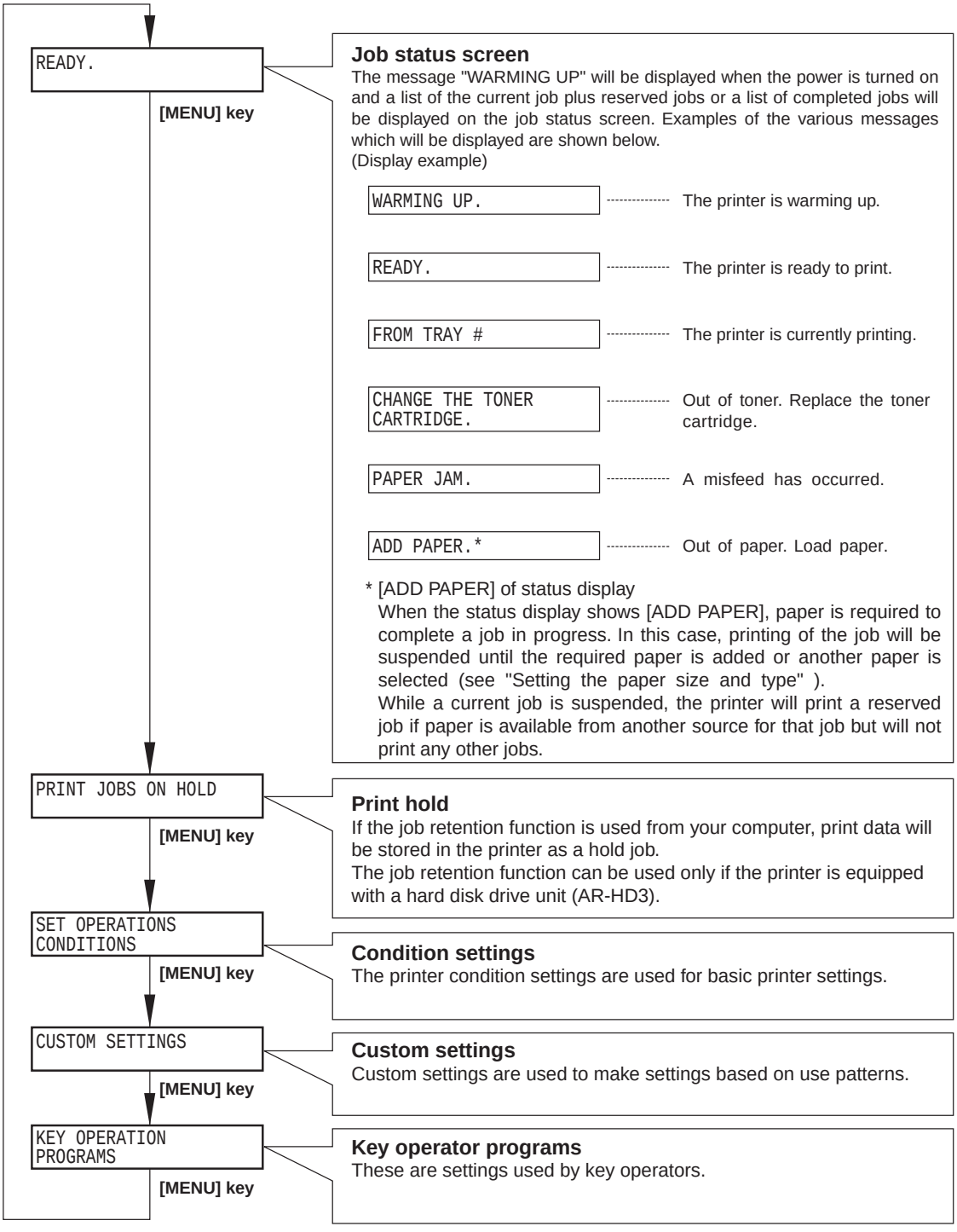
1. Function of each LED

	READY	DATA	ERROR
ON	Print job reception enable	•When RIP-completed print data are stored in memory.	•When a trouble which can be canceled by the user occurred.
Flash		•When data are processed in the printer board (during RIP).	•When a trouble which requires service call occurred.
OFF	Print job reception disable	•Neither print data nor data under process are stored.	•No trouble

* RIP:Raster In Processor. Develops the print command into pixel information.

2. Outline of each mode

The menu groups are classified into five groups and are selected consecutively by pressing the [MENU] key. If the [OK] key is pressed when the desired menu screen is displayed, a message will appear to indicate the next required operation.
In addition, there is the service diag mode used for a serviceman.(with the scanner unit installed)


READY.
[MENU] key
Job status screen
The message "WARMING UP" will be displayed when the power is turned on and a list of the current job plus reserved jobs or a list of completed jobs will be displayed on the job status screen. Examples of the various messages which will be displayed are shown below.
(Display example)
WARMING UP. The printer is warming up.
READY. The printer is ready to print.
FROM TRAY # The printer is currently printing.
CHANGE THE TONER CARTRIDGE. Out of toner. Replace the toner cartridge.
PAPER JAM. A misfeed has occurred.
ADD PAPER.* Out of paper. Load paper.
* [ADD PAPER] of status display
When the status display shows [ADD PAPER], paper is required to complete a job in progress. In this case, printing of the job will be suspended until the required paper is added or another paper is selected (see "Setting the paper size and type").
While a current job is suspended, the printer will print a reserved job if paper is available from another source for that job but will not print any other jobs.
PRINT JOBS ON HOLD
[MENU] key
Print hold
If the job retention function is used from your computer, print data will be stored in the printer as a hold job.
The job retention function can be used only if the printer is equipped with a hard disk drive unit (AR-HD3).
SET OPERATIONS CONDITIONS
[MENU] key
Condition settings
The printer condition settings are used for basic printer settings.
CUSTOM SETTINGS
[MENU] key
Custom settings
Custom settings are used to make settings based on use patterns.
KEY OPERATION PROGRAMS
[MENU] key
Key operator programs
These are settings used by key operators.

3. Setting mode on Computer side

Mode	Outline	Remark
Setting by the printer driver	Changed and set according to the print form of each job.	
Web menu frame	Used to set the work board functions from the Web browser (*1).	Only when the NIC board (AR-NC5J) is installed.

*1: Recommended Web browser
Internet Explorer 4.0 or later,
Netscape Navigator 4.0 or later

4.Printer environment setup

		Set value (Default)
Initial setup	Smoothing	YES* • NO
	Number of copies	1* ~ 999
	Print direction	Vertical* • Horizontal
	Standard paper feed paper size	A3 • B4 • A4* • B5 • A5 11” x 17” • 8.5” x 14” • 8.5” x 13” • 8.5” x 11” • 7.25” • 10.5” • 5.5” x 8.5”
	Standard paper feed paper type	Normal paper, printed paper, recycled paper, letter head paper, punched paper, color paper
	Standard paper exit tray	Differs depending on installation of peripheral devices. *1
	White paper print inhibition	Inhibit / Allow*
SPDL setup		See separate sheet 1.
PS setup		(PS error cause) Print / not print *
ESC / P(Super) setup	Print mode setup	
	Paper position setup (PC-PR201H only)	
	Position correction setup	
	Japanese font setup	
	European language font setup	
	Character code table setup	
	Print column range setup	
	Print start position setup	
	Change-line code setup	
	Perforations skip setup	
	Each language character setup (PC-PR201H only)	
	Zero character selection	
	Reduction print	
	Print quantity setup	
	Print direction setup	
	Standard paper feed paper size setup	
	Standard paper exit tray setup	
	Hexadecimal dump output setup	
	I / O timeout time setup	
	Setup list print	
	Standard paper feed paper type setup	
	A4 / Letter automatic selection	
	Precaution notifying page print inhibition	

5.User setup

		Set value (Default)
Total print quantity display		
LCD contrast adjustment		
List print	Setup list	
	Printer test page	
Time setup		
Paper feed tray setup		
Paper feed tray automatic selection		

6.Web menu frame

		Set value (Default)
Receiver management	Email distribution scan receiver setup	
	File server store scan store receiver information setup	
	Desktop distribution scan receiver information setup	
	FAX receiver information setup	
	Internet FAX receiver information setup	
	Group receiver information setup	
	Confirmation of receiver information delete	
Memory box management	Remote send	
	Confidential reception	
	Interface broadcast (forward)	
Management setup	Network card setup	
	Password setup	
	Network scanner basic setup	
	Email status basic setup	
	Email system and DNS system basic setup	
	Email sender setup	
	Group index setup	
	Email status setup	

7. Key operator program

Key operator program			Set value (Default) Engine section LCD	Remark
Auditor setup	Department counter setup		ON / OFF*	
	Print quantity total	Print quantity total user display	ON / OFF*	
		Print quantity print		
	Total delete			
	Department number setup	Dpt. number registration (5 digits)		
		Dept. number / Delete		
		Dept. number / Change		
		Dept. number / Print		
	Print inhibit with disabled dept. number		Yes / No*	
Energy-save setup	Auto power shut off setup		15min / 30min / 60min* / 120min / 240min	
	Auto power shut off inhibit		Inhibit / Allow*	
	Pre-heat mode setup		15min / 30min / 60min / 120min / 240min / None*	
	Toner save		ON / OFF*	
Operation panel setup	Auto clear time setup		15sec / 30sec / 60sec* / OFF	
	Message display time setup		3sec / 6sec* / 9sec / 12sec	
	Display language setup		Japanese* • English • French • Spanish	
Device setup	Duplex function inhibit		Yes / No*	
	Staple inhibit		Yes / No*	
	Paper feed desk inhibit		Yes / No*	
	Finisher inhibit		Yes / No*	
	Male bin stacker inhibit		Yes / No*	
	Inter staple position adjustment	Paper size A3	-3.0mm ~ 0.0mm* ~ 3.0mm (0.1mm unit)	With the saddle finisher installed
		Paper size B4	-3.0mm ~ 0.0mm* ~ 3.0mm (0.1mm unit)	
		Paper size A4R	-3.0mm ~ 0.0mm* ~ 3.0mm (0.1mm unit)	
		Paper size Leisure	-3.0mm ~ 0.0mm* ~ 3.0mm (0.1mm unit)	
		Paper size Letter R	-3.0mm ~ 0.0mm* ~ 3.0mm (0.1mm unit)	
Key operator program list print				
Key operator code change	First setup of key operator code		00000*	
System management setup	Basic setup	Print density adjustment	Standard* / Light / Slightly light / Slightly dark / Dark	
		Precaution notifying page output inhibit	Yes* / No	
		Test page output inhibit	Yes* / No	
		A4 / Letter size auto selection	ON / OFF*	
	Interface setup	Hexadecimal dump mode	ON / OFF*	
		Parallel port PDL selection	Auto* / PostScript / SPDL / ESC / P(Super)	
		Network PDL selection	Auto* / PostScript / SPDL / ESC / P(Super)	
		I / O timeout selection	1sec ~ 20sec* ~ 999sec	
		Port selection setup	For every job * / Time out / Parallel port disable / Network port disable	
	Network setup	IP address setup	IP address setup000.000.000.000*	
			IP net mask setup000.000.000.000*	
			IP gateway setup000.000.000.000*	
		TCP / IP setup	Yes* / No	
		NetWare enable	Yes* / No	
		EtherTalk enable	Yes* / No	
		NetBEUI enable	Yes* / No	
		NIC reset		
	System setup store / recall	Setup reset		
		Setup store		
		Setup value recall		
	Soft key	PS3 expansion kit soft input		
		Network scanner expansion kit soft key input		

8. Canceling a print job and deleting print data

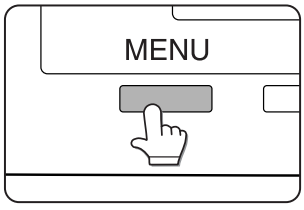
•To cancel a print job in progress and delete the print data:
Press the [BACK/CLEAR] key during printing. Printing will stop and a message asking for confirmation to delete the job will appear.
To delete the data, press the [OK] key.
To cancel deletion, press the [BACK/CLEAR] key. Printing will resume.

•To delete print data of a reserved job (that waits for printing):
Print data transmitted from computers will be stored in this printer (up to 99 jobs) and will be output sequentially. To delete print data of a reserved job before starting printing, press the [△] or [▽] key to display the desired data in the message display.
If you press the [BACK/CLEAR] key at this time, a confirmation message for deletion will appear. To delete the data, press the [OK] key.
To cancel deletion, press the [BACK/CLEAR] key. Printing will resume.

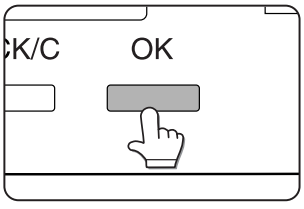
9. Setting the paper size and type

When the paper size or type is changed in a paper tray, set them referring to the following procedure.

1) Press the [MENU] key repeatedly until "CUSTOM SETTINGS" appears in the message display.



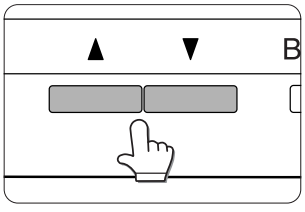
2) Press the [OK] key.
When the [OK] key is pressed, "TRAY SETTING" will appear in the message display.



3) Press the [OK] key.
When the [OK] key is pressed, the message shown to the left will appear in the message display.

```
TRAY  SETTING
              TRAY1▼
```

4) Select the desired paper tray.
Press the [△] or [▽] key repeatedly until the desired paper tray is indicated in the display.



5) Press the [OK] key.
The paper size and paper type of the tray selected in step 4) will appear.

•If TRAY 1 is selected in step 4), the message shown to the below will appear in the display.

```
LETTER
PLAIN              ▼
```

6) Press the [▽] key.

•If TRAY 1 is selected in step 4), the message shown to the left will appear in the display.

```
CHANGE  TRAY1
SETTING  OK?
```

7) Press the [OK] key.
To cancel the setting change, press the [BACK/C] key to return to step 4).

NOTE: Special paper such as thick paper, transparency film, labels, and postcards can be set for tray 2 and the bypass tray. Envelopes can be set only for tray 2.

8) Select the paper type that has been set in the tray.
Press the [△] or [▽] key repeatedly until the paper type that has been set appears.

```
PLAIN
OK?
```

9) Press the [OK] key.

10) Ensure that the desired paper size is selected.

•Press the [△] or [▽] key repeatedly until the desired paper size appears.

```
LETTER
OK?
```

•Depending on the selected tray, a selection for"AUTO-AB" and "AUTO-INCH" may appear
"AUTO-AB": Select when you have set AB system paper.
"AUTO-INCH": Select when you have set inch system paper.
When the paper system is changed from the inch system to the AB system or vise versa, the paper type must be designated. Select the paper type.

•If you have set paper of non-standard size, select "NON STANDARD". This size can be selected when tray 2 or the bypass tray has been selected in step 4).

11) Press the [OK] key to terminate the setting.

10. Specifications of paper trays

The specifications for types and sizes of paper for loading paper trays are shown below.

Tray		Tray No. (tray name)	Applicable paper types		Applicable paper sizes	Paper weight
Paper tray 1		Tray 1	Plain paper (Refer to the next page for applicable papers.)		•8-1/2 x 11, A4, B5	16 to 28 lbs. or 60 to 105g/m²
Multi purpose drawer/ bypass tray		Tray 2/ bypass tray	Plain paper (Refer to the next page for applicable papers.)		•If "AUTO-INCH" is selected in setting the paper size and type, the following paper sizes can be used with the automatic detection function: 11 x 17, 8-1/2 x 14, 8-1/2 x 11, 8-1/2 x 11R, 7-1/4 x 10-1/2, 5-1/2 x 8-1/2R •If "AUTO-AB" is selected in setting the paper size and type, the following paper sizes can be used with the automatic detection function: A3, B4, A4, A4R, B5, B5R, A5R, 8-1/2 x 13 •Non-standard sizes	16 to 34 lbs. or 60 to 128g/m²
			Special paper (Refer to the next page for applicable papers.)	•Thick paper •Labels, transparency film	•If "AUTO-INCH" is selected in setting the paper size and type, the following paper sizes can be used with the automatic detection function: 8-1/2 x 11, 8-1/2 x 11R •If "AUTO-AB" is selected in setting the paper size and type , the following paper sizes can be used with the automatic detection function: A4, A4R, B5, B5R •Non-standard sizes smaller than 8-1/2 x 11 or A4	See the remarks for special paper
				Postcard	•Japanese official postcard	
				Envelopes can only be fed from the multi-purpose drawer. Applicable paper stock weight for envelopes is 20 to 23 lbs. or 75 to 90g/m²	•Applicable standard size envelopes: COM-10, Monarch, DL, C5, ISO B5 •Non-standard size	
Stand/3 x 500 sheet paper drawer	Upper	Tray 2	Same as multi purpose drawer			
	Middle	Tray 3	Plain paper (Refer to the next page for applicable papers.)		•If "AUTO-INCH" is selected in setting the paper size and type, the following paper sizes can be used with the automatic detection function: 11 x 17, 8-1/2 x 14, 8-1/2 x 11, 8-1/2 x 11R, 7-1/4 x 10-1/2, 5-1/2 x 8-1/2R •If "AUTO-AB" is selected in setting the paper size and type, the following paper sizes can be used with the automatic detection function: A3, B4, A4, A4R, B5, B5R, A5R, 8-1/2 x 13	16 to 28 lbs. or 60 to 105g/m²
	Lower	Tray 4				
Stand/ MPD & 2000 sheet paper drawer	Upper	Tray 2	Same as multi purpose drawer			
	Lower	Tray 3	Plain paper (Refer to the next page for applicable papers.)		•8-1/2 x 11, A4	16 to 28 lbs. or 60 to 105g/m²

A. Applicable plain paper

For satisfactory results, plain paper must conform to the following requirement

	Paper in AB system	Paper in inch system
	A5 to A3	5-1/2 x 8-1/2 to 11 x 17
Plain paper	16 to 28 lbs. or 60 to 105g/m²	
Recycled, colored, pre-punched, pre-printed and letterhead papers must conform to the same conditions as above.		

B. Applicable special paper

For satisfactory results, special paper must conform to the following requirements.

	Type	Remarks
Special paper	Thick paper	•For 5-1/2 x 8-1/2 to 8-1/2 x 11 or A5 to A4 sizes, thick paper ranging from 16 to 34 lbs. or 60 to 128g/m² can be used. •For sizes larger than 8-1/2 x 11 or A4, thick paper ranging from 16 to 28 lbs. or 60 to 105g/m² can be used. •Other thick papers Index stock (65 lbs. or 176g/m²) can be used. Cover stock (110 lbs. or 200 to 205g/m²) can be used but only for 8-1/2 x 11, A4 or smaller paper in the portrait orientation.
	Transparency film, labels, and tracing paper	•Use SHARP recommended paper. Do not use labels other than SHARP recommended labels. Doing so may leave adhesive residue in the printer, causing paper misfeeds, smudges on prints or other machine trouble.
	Postcards	•Japanese official postcards can be used.
	Envelopes	•Applicable standard envelopes: COM-10, Monarch, DL, C5, ISO B5 •Envelopes can only be fed from the multi-purpose drawer. Applicable paper stock weight for envelopes is 20 to 23 lbs. or 75 to 90g/m².

[9] ADJUSTMENTS

		Contents of adjustment	
1	Process section	A	Doctor gap adjustment
		B	MG roller main pole position adjustment
		C	High voltage output check and adjustment
2	Engine	A	LSU right-angle adjustment
		B	Print magnification ratio adjustment
		C	Print off-center adjustment
		D	Self print lead edge adjustment
		E	Void area adjustment
		F	Resist quantity adjustment
		G	Option paper feed tray paper guide adjustment
		H	Option manual feed section paper guide position adjustment

1. Process section

A. Doctor gap adjustment

This adjustment is performed in the following cases:

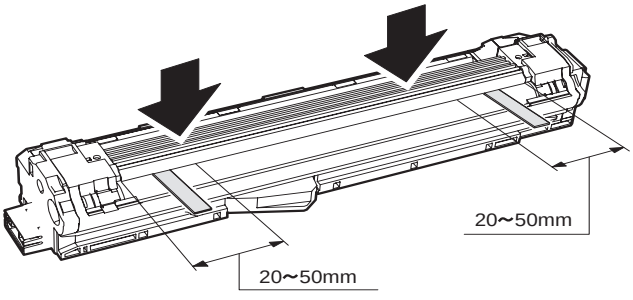
•When developer is scattered.

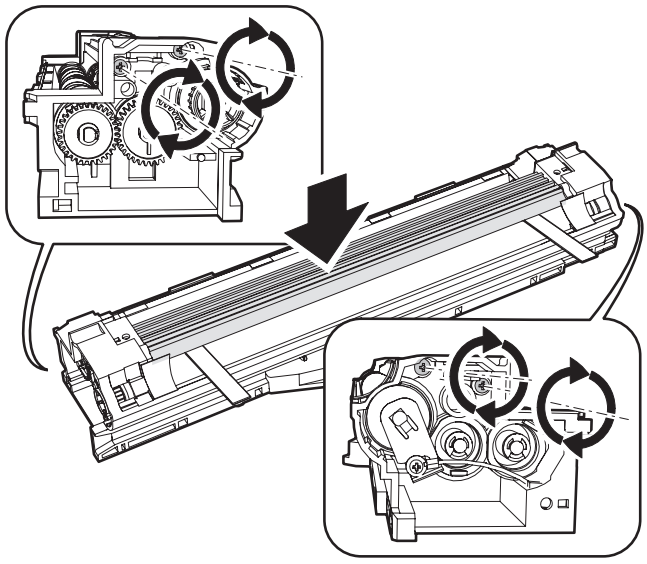
•When an uneven image is produced.

1) Remove the developer cartridge and the developing unit from the machine.
2) Remove the DV cover and the developer from the developing unit.
3) Remove the DVR cover, the DVF handle, the idle correction plate assembly, and the HG gear 22T, insert a thickness gauge (0.46mm) as shown in the figure below, and check that the clearance is within the specified range.

If the clearance is not within the specified range, adjust the doctor gap in the following procedures.

4) Loosen the developing doctor fixing screw A.
5) Insert the thickness gauge (0.46mm) again as shown in the figure below.
6) Push the developing doctor in the arrow direction and tighten the fixing screw.
7) Check the developing doctor gap. If the clearance is within the specified range, fix the screw with screw lock.
8) After completion of the job, apply screw lock.





<Adjustment specification>

		Specification	Ambient temperature
Both sides	Position at 20 - 50mm	0.45±0.03mm	5 - 30°C

B. MG roller main pole position adjustment

This adjustment is performed in the following cases:

•When developer is scattered.

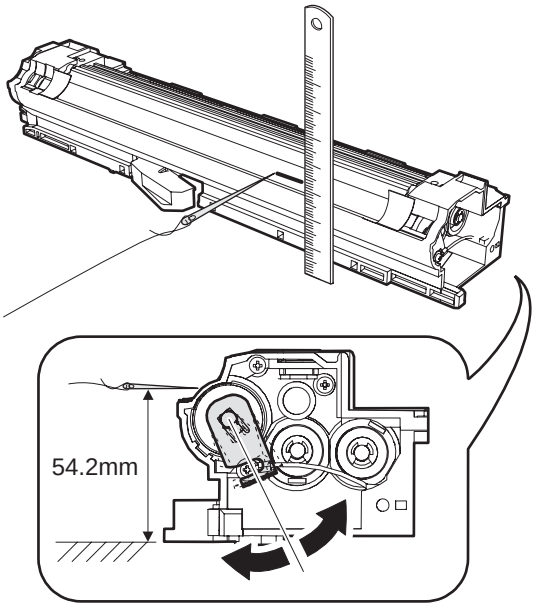
•When an uneven image is produced.

1) Remove the developer cartridge and the developing unit from the machine.
2) Remove the DV cover and the developer from the developing unit.
3) Remove the DVF handle and put the developing unit on a flat surface.
4) Bind a string to a needle.
5) Hold the string and move the needle toward the MG roller. (Since the MG roller diameter is small, use of a clip cannot make an accurate adjustment.)
6) With the needle tip 2 - 3 mm apart from the MG roller surface, mark the point on the MG roller in the elongated line of the needle. (Keep the needle and the MG roller apart from each other.)
7) Measure the distance from the marking position to the P surface of the developing unit, and check that the distance is within the specified range.

If the distance is not within the specified range, perform the adjustment in the following procedures.

8) Loosen the fixing screw of the main pole fixing plate.

9) Move the adjustment plate in the arrow direction and adjust.

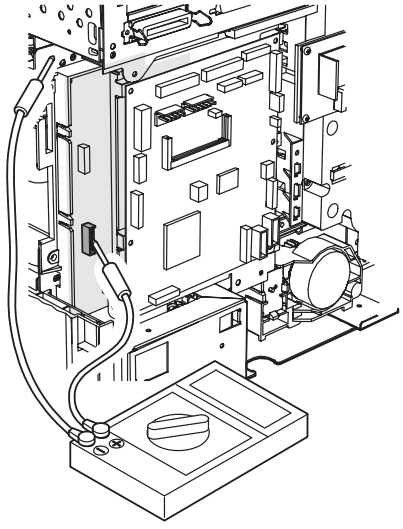


<Adjustment specification>

		Specification	
Marking position	Measure from the P surface above.	54.2mm	

C. High voltage output check and adjustment

1) While pressing the MENU key and the OK key, turn on the power switch.
2) The operation panel displays "PCU DIAG MODE."
   * After releasing your fingers from the keys, do not touch any key for about 8 sec.
3) Press the MENU key several times until "HV TEST MC/GRID" is displayed.
4) Select a load to be outputted with [△] and [▽] keys.
5) Press the OK key to determine the selected load.
6) Apply the high voltage tester across the measuring pin according to the selected load and the frame.



7) The set value is displayed on the LCD. Check it and adjust so that it is in the specified range.

The output mode is as shown in the table below.

LCD display				Spec	Measuring pin
MC/GRID	AE	MC grid	AE mode	-650V±5V*	CN2-7
	CHR		Text mode	-650V±5V*	
	MIX		Text Photo mode	-650V±5V*	
	PHT		Photo mode	-650V±5V*	
	PRT		Printer mode	-650V±5V*	
	FAX		FX mode	-650V±5V*	
THV+	F	Transfer voltage	Front side		CN2-5
	B		Rear side		
BS	AE	Developing bias	AE mode	-500V±5V*	CN2-1
	CHR		Text mode	-500V±5V*	
	MIX		Text Photo mode	-500V±5V*	
	PHT		Photo mode	-500V±5V*	
	PRT		Printer mode	-500V±5V*	
	FAX		FX mode	-500V±5V*	
	PLUS		Positive bias	+500V±5V*	
SHV	F	Separation voltage	Front side	1.25V±0.1V	CN2-3
	R		Rear side	1.25V±0.1V	
THV		Transfer voltage discharge		-800V±10V*	CN2-5

* Varies with time by the process control process.

2. Engine

A. LSU right-angle adjustment

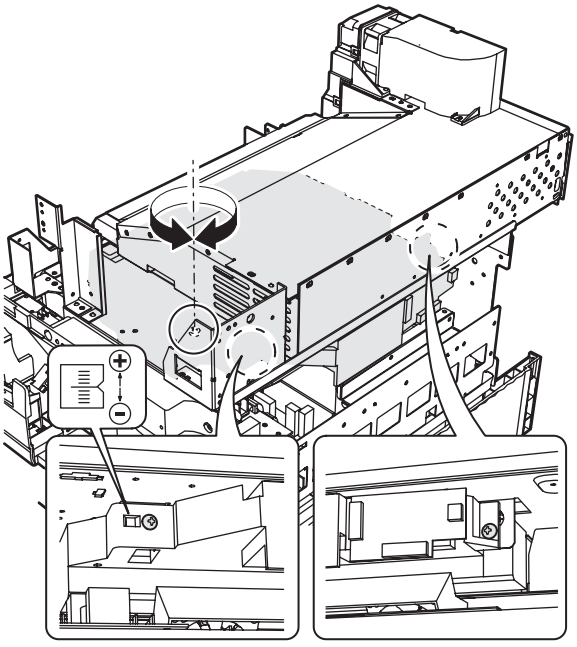
This adjustment is required in the following cases:

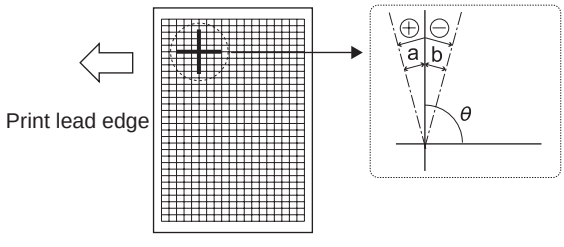
- •When the LSU is replaced.
- •When a distortion is produced in print.
  (Check with self print pattern "71".)

After completion of this adjustment, the following adjustments should be performed.

- •Print magnification ratio adjustment
- •Print off-center adjustment
- •Void area adjustment

1) Hold and push the [MENU] key and the [OK] key, and turn on the power. ("PCU DIAG MODE ***" is displayed.)
   * Do not touch the keys for about 8sec after releasing fingers from the above keys.
2) Push the [MENU] key several times until "TEST PRINT" is displayed, and push the [OK] key to enter the test print mode.
3) Push the [MENU] key several times until "PRITN PATTERN" is displayed, and set "71".
4) Push the [MENU] key several times until "CASSETTE" is displayed, and check with [△] key that the paper for tray 1 is properly set for the destination.
   * AB series: "A4" is displayed
   * Inch series: LETTER is displayed.
5) Push the [OK] key to make self-print.
6) Check the output print.
7) Loosen two fixing screws of the LSU unit (M4 screws which are fixing the LSU and the top plate).
8) Turn the adjustment screw on the upper side (on the back of the printer operation panel) clockwise or counterclockwise to adjust the height of the LSU front side.
9) After completion of the adjustment, tighten two fixing screws of the LSU unit.
10) Print again in the grid pattern and check the print.
11) Repeat procedures 7) to 10) until the specification is satisfied.





<Specification>

	Measuring point	Specification	Set value
Print distortion adjustment	Self print pattern 71	θ = 90° ± 0.13°	θ changes about 0.25 degrees for 1 scale of adjustment.

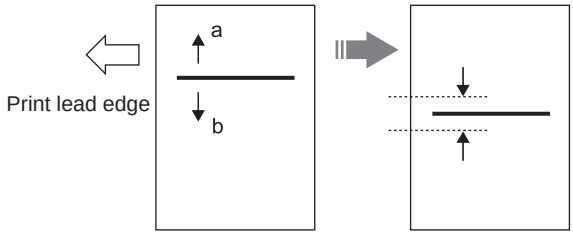
B. Print off-center adjustment

This adjustment is performed in the following cases:
- •When the center of print is misaligned. (Check with the self print pattern "1".)
- •When the LSU is replaced.
- •When the option paper feed unit or the automatic duplex unit is installed or replaced.

Before executing this adjustment, the following adjustments must have been completed.
- •LSU right-angle adjustment
- •Print magnification ratio adjustment

After completion of this adjustment, the following adjustment must be performed.
- • Void area adjustment

1) Hold and push the [MENU] key and the [OK] key, turn on the power. ("PCU DIAG MODE ***" is displayed.)
   * Do not touch the keys for about 8sec after releasing fingers from the above keys.
2) Push the [MENU] key several times until "TEST PRINT" is displayed, and push the [OK] key to enter the test print mode.
3) Make a print with "1".
4) Push the [MENU] key several times until T1 OFF CENTER ADJ is displayed, and push the [OK] key.
5) Check the print and use [△] or [▽] key to adjust the value of T1 OFF CENTER ADJ so that the off-center value is within the specified range.
6) If the option paper feed unit or the automatic duplex unit is installed, make an adjustment for each unit.
   * When using the duplex unit, set DUPLEX to USE.



	Measurement reference	Specification	Set value	
Standard tray self print off-center (T1 OFF CENTER ADJ)	Output pattern 1 Center line	0 ±1.5mm	Shift of 0.1mm for set value 1.	
No. 2 tray self print off-center (T2 OFF CENTER ADJ)				When the option paper feed unit is installed.
No. 3 tray self print off-center (T3 OFF CENTER ADJ)				
No. 4 tray self print off-center (T4 OFF CENTER ADJ)				
Manual feed tray self print off-center (MFT OFF CENTER ADJ)		0 ±1.5mm		When the option automatic duplex unit is installed.
ADU Self print off-center (ADU OFF CENTER ADJ)				

When the print line is shifted toward a from the paper center, decrease the value.
When the print line is shifted toward b from the paper center, increase the value.

C. Self print lead edge adjustment

This adjustment is performed in the following cases:

- •When the print start position is improper.
  (Check with the self print pattern "1".)
- •When the LSU is replaced.

Before executing this adjustment, the following adjustments must have been completed.

- •LSU right-angle adjustment
- •Print magnification ratio adjustment

After completion of this adjustment, the following adjustment must be performed.

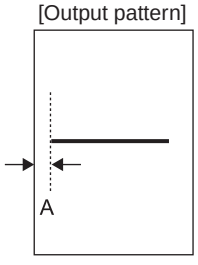
- •Void area adjustment

1) Hold and push the [MENU] key and the [OK] key, turn on the power. ("PCU DIAG MODE ***" is displayed.)
   * Do not touch the keys for about 8sec after releasing fingers from the above keys.
2) Push the [MENU] key several times until "TEST PRINT" is displayed, and push the [OK] key to enter the test print mode.
3) Make a print with "1".
4) Push the [MENU] key several times until LEAD EDGE is displayed, and push the [OK] key.
5) Check the print and use [△] or [▽] key to adjust the value LEAD EDGE so that the distance shown in the figure below is within the specified range.
6) Check that the print lead edge is within the specified range.

<Specification>

	Set position	Specification	Set value
Self print lead edge adjustment (LEAD EDGE)	Print start position A of the output pattern 1	A = 4.0mm or less (FR total: 8.0mm or less)	Shift of 0.175mm (35ppm) / 0.225mm (45ppm) for set value 1.

To increase the print lead edge, decrease the set value with [▽] key.
To decrease the print lead edge, increase the set value with [△] key.



D. Void area adjustment

This adjustment is performed in the following cases:

- •When the print start position is improper.
  (Check with the self print pattern "71".)
- •When the LSU is replaced.

Before executing this adjustment, the following adjustments must have been completed.

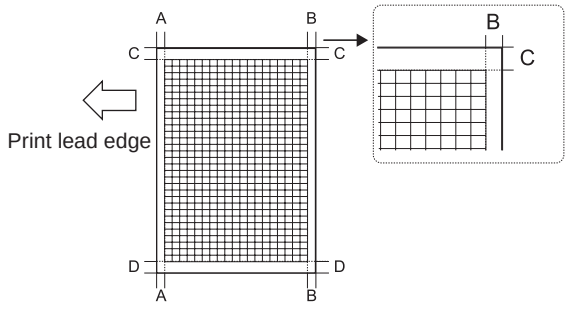
- •LSU right-angle adjustment
- •Print magnification ratio adjustment
- •Print off-center adjustment

1) Hold and push the [MENU] key and the [OK] key, turn on the power. ("PCU DIAG MODE ***" is displayed.)
   * Do not touch the keys for about 8sec after releasing fingers from the above keys.
2) Push the [MENU] key several times until "TEST PRINT" is displayed, and push the [OK] key to enter the test print mode.
3) Make a print with "71".
4) Push the [MENU] key several times until LEAD EDGE VOID is displayed, and push the [OK] key.
5) Check the print and use [△] or [▽] key to adjust the value LEAD EDGE VOID so that the distance A shown in the figure below is within the specified range.
6) Push the [MENU] key several times until TAIL EDGE VOID is displayed, and push the [OK] key to make a self print.
7) Check the self print and use [△] or [▽] key to adjust the value of TAIL EDGE VOID so that the distance B in the figure below is within the specified range.
8) Push the [MENU] key several times to display SIDE EDGE VOID, and push the [OK] key to make a self print.
9) Check the self print and use [△] or [▽] key to adjust the value of SIDE EDGE VOID so that the total of distances C ands D in the figure below is within the specified range.
10) Check that the lead edge is within the specified range.

<Specification>

	Measuring point	Specification	Set value
Lead edge void adjustment (LEAD EDGE VOID)	Output pattern 71 print void A	A = 4.0mm or less (Total of A and B = 8.0mm or less)	Shift of 0.1 mm for set value 1.
Rear edge void adjustment (TAIL EDGE VOID)	Output pattern 71 print void B	B = 4.0mm or less (Total of A and B = 8.0mm or less)	
Side edge void adjustment (SIDE EDGE VOID)	Output pattern 71 print void C-D	Total of C and D = 8.0mm or less	

To decrease the void quantity, decrease the set value with [▽] key.
To increase the void quantity, increase the set value with [△] key.



E. Resist quantity adjustment

This adjustment is performed in the following cases:

- •When the void quantity is changed by the paper feed tray.
- •When paper feed skew occurs.

Before executing this adjustment, the following adjustments must have been completed.

- •LSU right-angle adjustment
- •Print magnification ratio adjustment
- •Print off-center adjustment
- •Void area adjustment

1) Hold and push the [MENU] key and the [OK] key, turn on the power. ("PCU DIAG MODE ***" is displayed.)
   * Do not touch the keys for about 8sec after releasing fingers from the above keys.
2) Push the [MENU] key several times until "TEST PRINT" is displayed, and push the [OK] key to enter the test print mode.
3) Make a print with "71" from each paper feed tray.
4) Push the [MENU] key several times until PAPER BUCKLE is displayed.
   Adjust the resist quantity so that paper is transported normally.

<Factory setup>

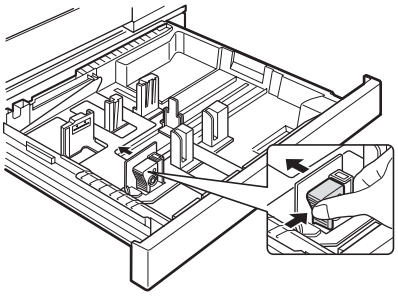
PAPER BUCKLE	45CPM	MFT	60
		T1	70
		T2	55
		T3	55
		T4	60
	35CPM	MFT	65
		T1	75
		T2	60
		T3	60
		T4	65

F. Option paper feed tray paper guide adjustment

This adjustment is performed in the following cases:

- •When the option paper feed tray is installed.
- •When the paper size detection fails.

1) Hold and push the [MENU] key and the [OK] key, turn on the power. ("PCU DIAG MODE ***" is displayed.)
   * Do not touch the keys for about 8sec after releasing fingers from the above keys.
2) Push the [MENU] key several times until "SIZE ADJUSTMENT A" is displayed, and push the [OK] key.
3) "MAXIMUM SIZE" is displayed on the LCD.
   Pull out the cassette, open the paper guide to the maximum, return the cassette to the machine, and push the [OK] key.
4) "MINIMUM SIZE" is displayed on the LCD.
   Pull out the cassette again from the machine, close the paper guide to the minimum, return the cassette to the machine, and push the [OK] key.

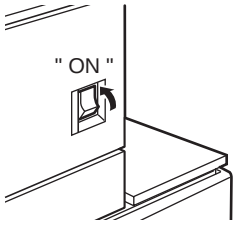


G. Manual feed section paper guide position adjustment

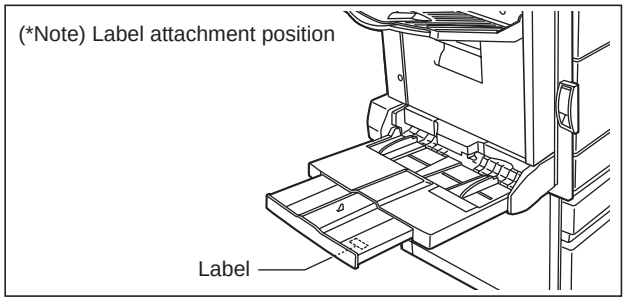
This adjustment is performed in the following cases:

- •When the duplex unit with the manual feed unit is installed.
- •When the manual feed tray paper size detection fails.

1) Hold and push the [MENU] key and the [OK] key, turn on the power. ("PCU DIAG MODE ***" is displayed.)
   * Do not touch the keys for about 8sec after releasing fingers from the above keys.



2) Push the [MENU] key several times until "SIZE ADJUSTMENT A" is displayed, and push [△] key to display "SIZE ADJUSTMENT B" and push the [OK] key.
3) "MAXIMUM SIZE" is displayed on the LCD.
   Check the value displayed with MAXIMUM SIZE. Use [△] or [▽] key to make the displayed value same as the MAX value specified on the label (* Note).
4) "P1 SIZE" and a value are displayed. Use [△] or [▽] key to make the displayed value same as the P1 value specified on the label (* Note).
5) "P2 SIZE" and a value are displayed. Use [△] or [▽] key to make the displayed value same as the P2 value specified on the label (* Note).
6) "MINIMUM SIZE" and a value are displayed. Use [△] or [▽] key to make the displayed value same as the MIN value specified on the label (* Note).



[10] DIAG

1.Diag mode

When the scanner unit is not installed, the machine can be checked and tested with the following diag mode.

Note: If the scanner unit is installed, this mode does not work.

A. Entering the diag mode

With the power OFF, hold and press the [MENU] key and the [OK] key, and at the same time turn on the power.

B. Selecting diag menus

Press the [MENU] key to change the diag menu.
*Press the [OK] key to execute the test.
*Press [△] or [▽] key to go to the input menu.
*Press the [BACK/C] key to return to the previous menu.

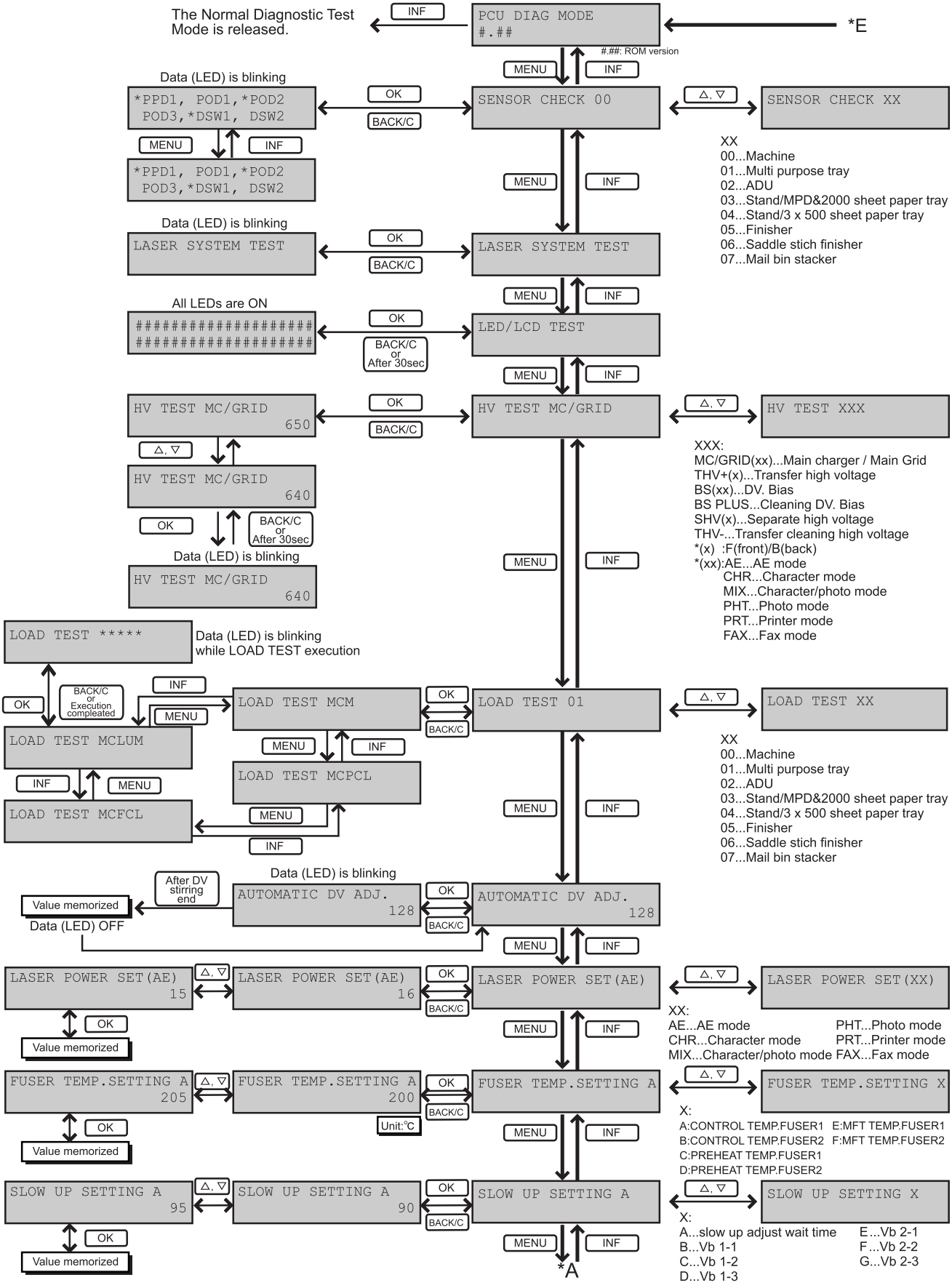
C. Canceling the diag mode

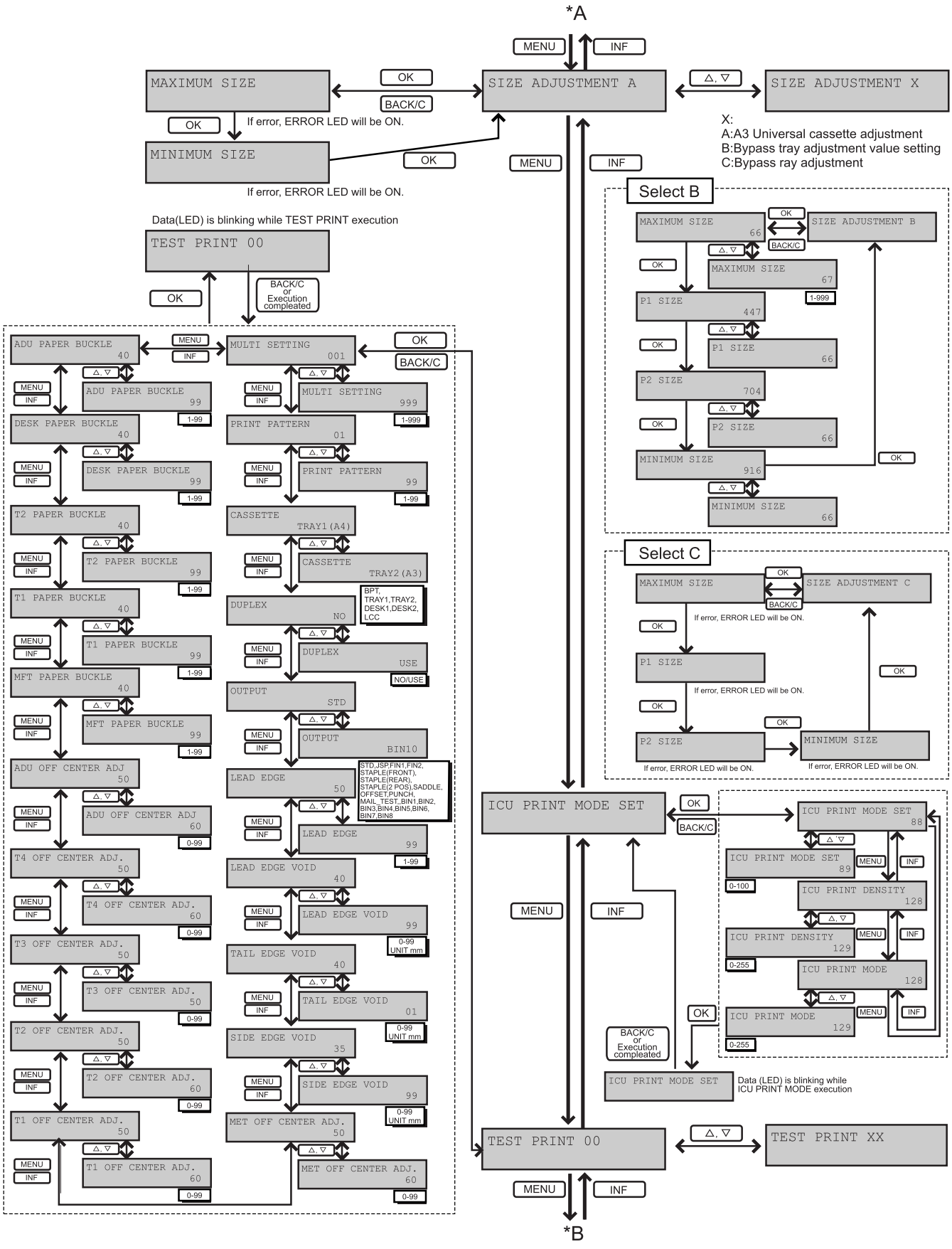
Power OFF/ON.

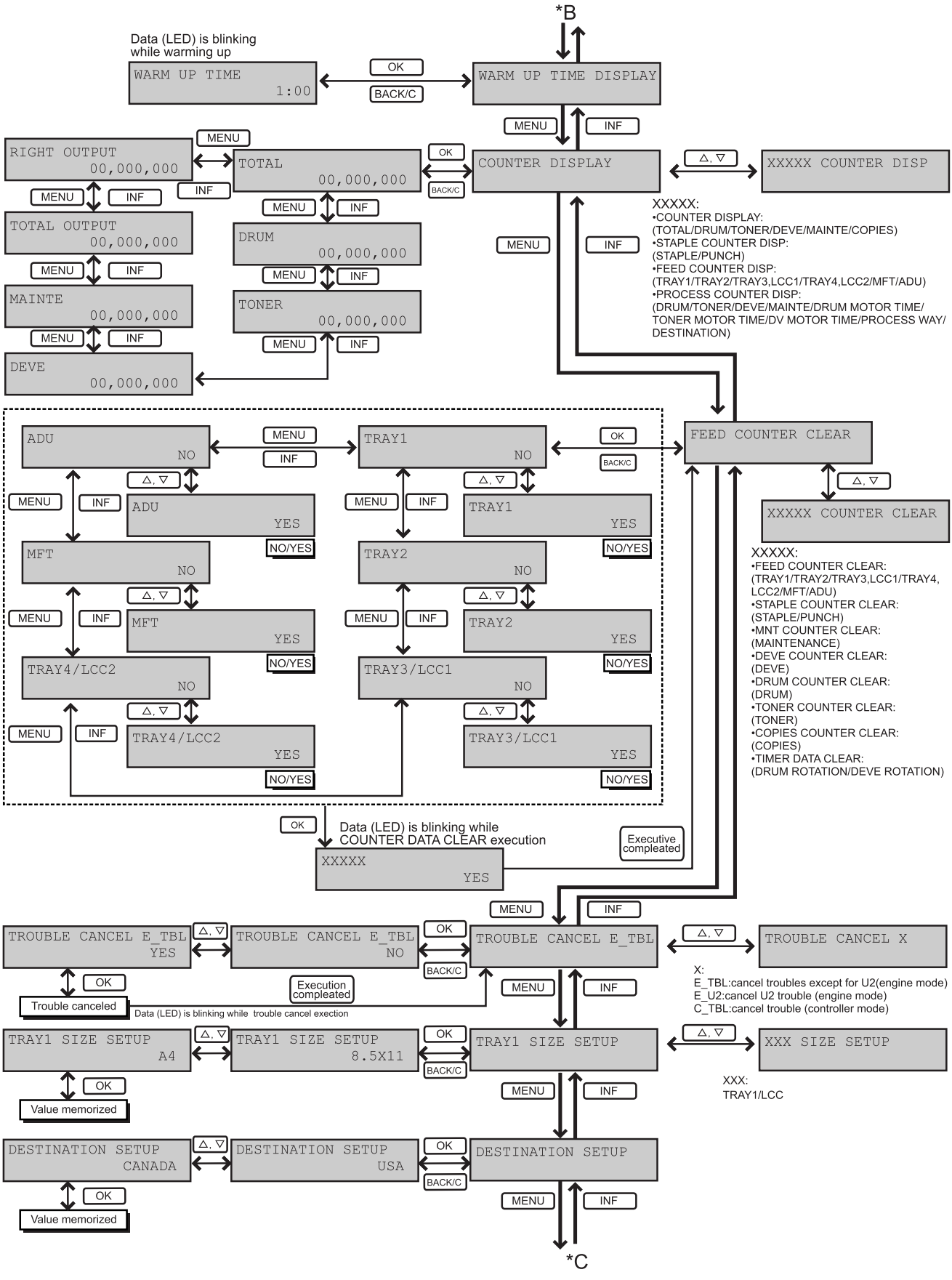
D. Diag mode list

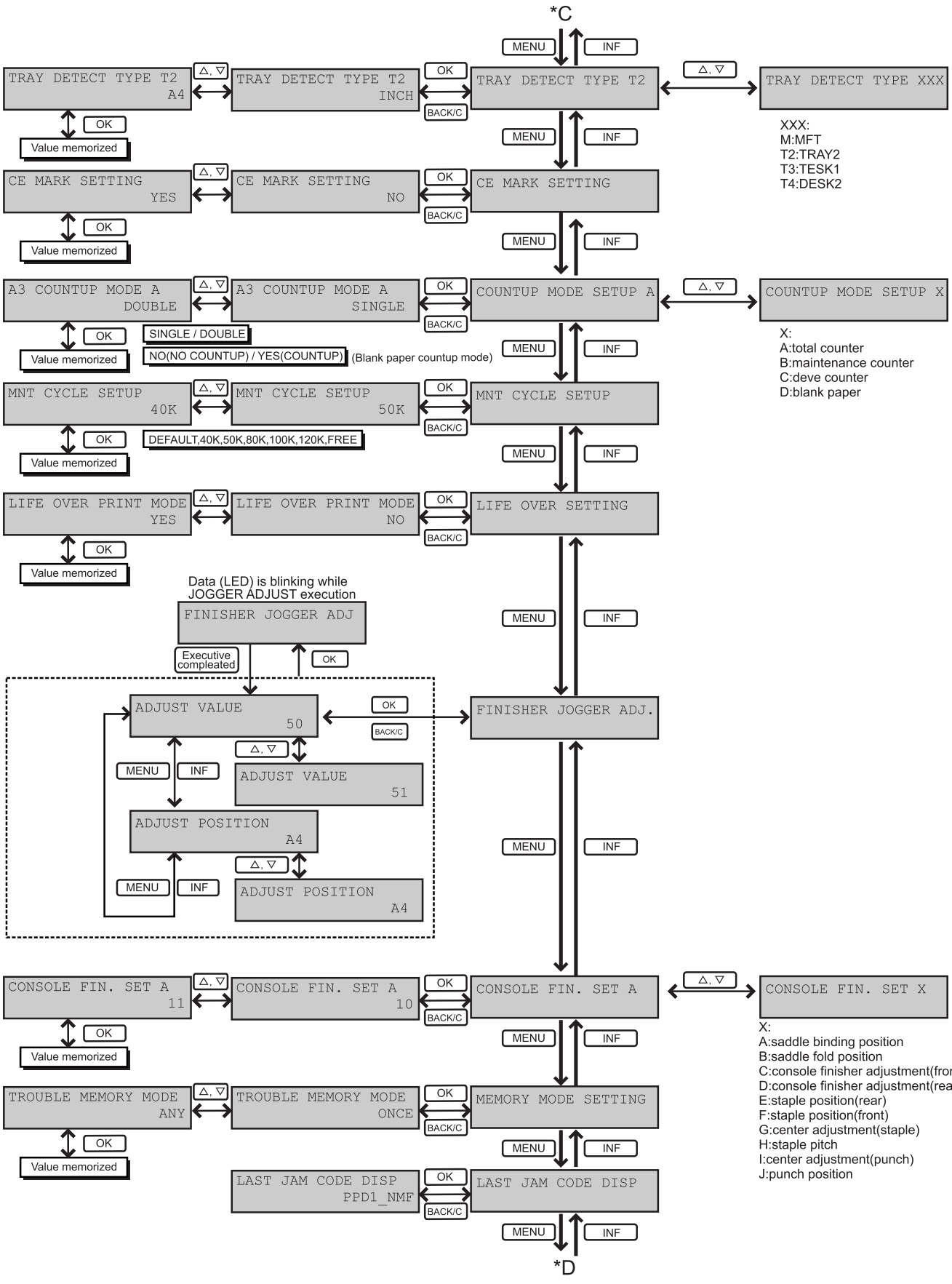
Menu	LCD display
Diag mode initial display	PCU DIAG MODE #
Sensor check mode	SENSOR CHECK XX
LSU test	LASER SYSTEM TEST
LED/LCD test	LED/LCD TEST
High voltage test	HV TEST XXX
Operation test mode	LOAD TEST XX
Auto developer adjustment	AUTOMATIC DV ADJ.
Laser output setup	LASER OUTPUT SETUP (XXX)
Fusing temperature setup	FUSER TEMP. SETTING X
Process control value setup	SLOW UP SETTING
Paper feed size setup	SIZE ADJUSTMENT X
ICU print mode setup	ICU PRINT MODE SET
Test print	TEST PRINT XX
Warm-up time display	WARM UP TIME DISPLAY
Counter display	COUNTER DISPLAY
Counter clear	COUNTER CLEAR
Trouble cancel	TROUBLE CANCEL X
Paper feed tray size setup	XXX SIZE SETUP
Destination setup	DESTINATION SETUP
Paper feed tray paper type setup	TRAY DETECT TYPE xx
CE mark setup	CE MARK SETTING
A3 count mode setup	COUNTUP MODE SETUP X
Maintenance cycle setup	MNT CYCLE SETUP
Operation-at-life-over setup	LIFE OVER SETTING
Finisher jogger adjustment	FINISHER JOGGER ADJ.
Console finisher setup	CONSOLE FIN. SET X
Trouble memory mode setup	MEMORY MODE SETTING
Last JAM code display	LAST JAM CODE DISP
System information display	SYSTEM INFORMATION X
Process control data display	PROCESS DATA DISP X
Port check	CENTRO PORT CHECK
SELECT IN signal setup	SELECT IN SIGNAL SET

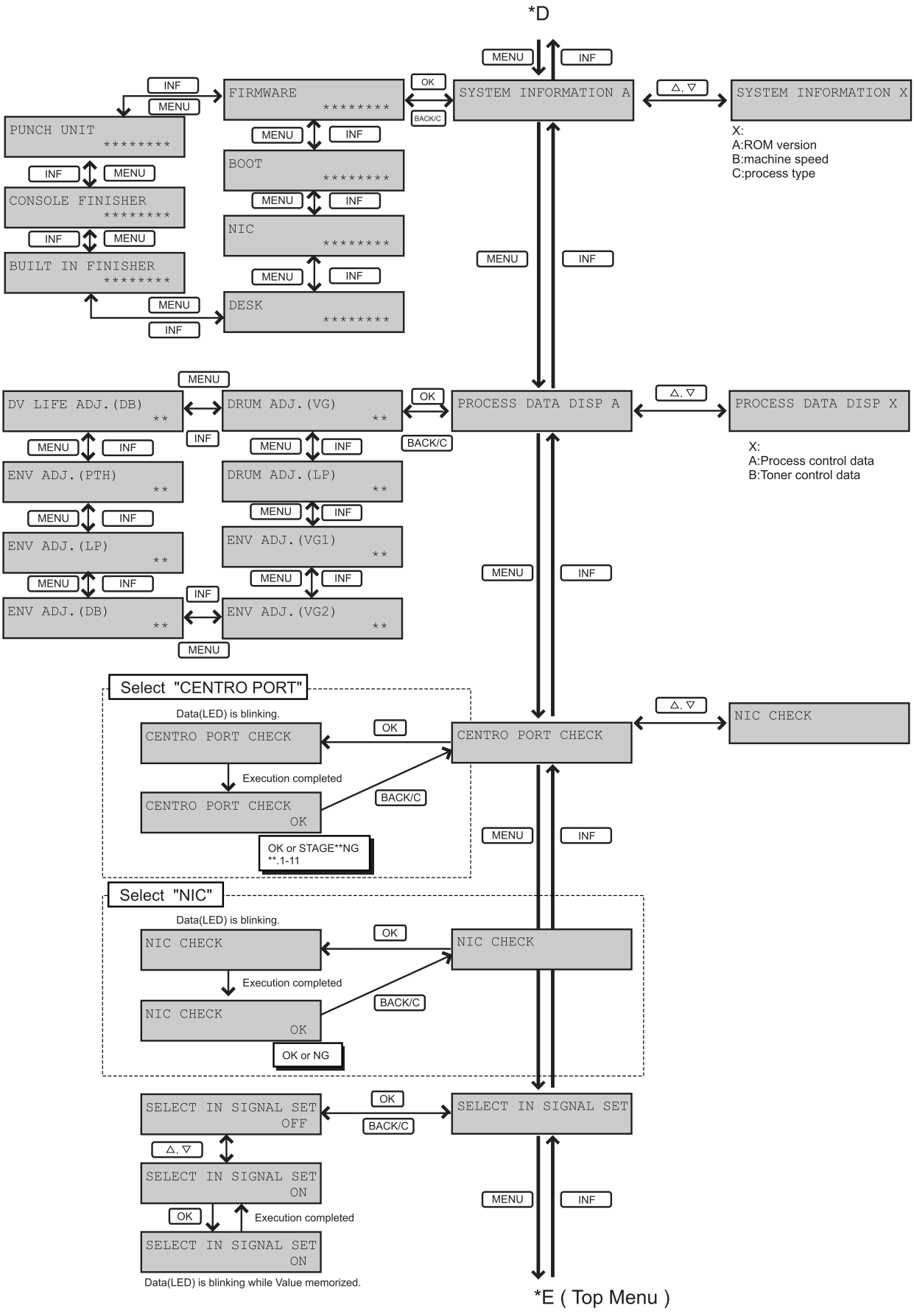
E. Diag mode menu transition




*A
MENU
INF
MAXIMUM SIZE
OK
BACK/C
SIZE ADJUSTMENT A
△, ▽
SIZE ADJUSTMENT X
OK
If error, ERROR LED will be ON.
MINIMUM SIZE
OK
If error, ERROR LED will be ON.
X:
A:A3 Universal cassette adjustment
B:Bypass tray adjustment value setting
C:Bypass ray adjustment
Select B
MAXIMUM SIZE 66
SIZE ADJUSTMENT B
MAXIMUM SIZE 67
1-999
P1 SIZE 447
P1 SIZE 66
P2 SIZE 704
P2 SIZE 66
MINIMUM SIZE 916
MINIMUM SIZE 66
Select C
MAXIMUM SIZE
SIZE ADJUSTMENT C
If error, ERROR LED will be ON.
P1 SIZE
If error, ERROR LED will be ON.
P2 SIZE
If error, ERROR LED will be ON.
MINIMUM SIZE
If error, ERROR LED will be ON.
Data(LED) is blinking while TEST PRINT execution
TEST PRINT 00
BACK/C or Execution compleated
ADU PAPER BUCKLE 40
ADU PAPER BUCKLE 99
1-99
DESK PAPER BUCKLE 40
DESK PAPER BUCKLE 99
T2 PAPER BUCKLE 40
T2 PAPER BUCKLE 99
T1 PAPER BUCKLE 40
T1 PAPER BUCKLE 99
MFT PAPER BUCKLE 40
MFT PAPER BUCKLE 99
ADU OFF CENTER ADJ 50
ADU OFF CENTER ADJ 60
0-99
T4 OFF CENTER ADJ. 50
T4 OFF CENTER ADJ. 60
T3 OFF CENTER ADJ. 50
T3 OFF CENTER ADJ. 50
T2 OFF CENTER ADJ. 50
T2 OFF CENTER ADJ. 60
T1 OFF CENTER ADJ. 50
T1 OFF CENTER ADJ. 60
MULTI SETTING 001
MULTI SETTING 999
1-999
PRINT PATTERN 01
PRINT PATTERN 99
CASSETTE TRAY1(A4)
CASSETTE TRAY2(A3)
BPT, TRAY1,TRAY2, DESK1,DESK2, LCC
DUPLEX NO
DUPLEX USE
NO/USE
OUTPUT STD
OUTPUT BIN10
STD,JSP,FIN1,FIN2, STAPLE(FRONT), STAPLE(REAR), STAPLE(2 POS),SADDLE, OFFSET,PUNCH, MAIL_TEST,,BIN1,BIN2, BIN3,BIN4,BIN5,BIN6, BIN7,BIN8
LEAD EDGE 50
LEAD EDGE 99
LEAD EDGE VOID 40
LEAD EDGE VOID 99
0-99 UNIT mm
TAIL EDGE VOID 40
TAIL EDGE VOID 01
SIDE EDGE VOID 35
SIDE EDGE VOID 99
MET OFF CENTER ADJ. 50
MET OFF CENTER ADJ. 60
ICU PRINT MODE SET
ICU PRINT MODE SET 88
ICU PRINT MODE SET 89
0-100
ICU PRINT DENSITY 128
ICU PRINT DENSITY 129
0-255
ICU PRINT MODE 128
ICU PRINT MODE 129
BACK/C or Execution compleated
ICU PRINT MODE SET
Data (LED) is blinking while ICU PRINT MODE execution
TEST PRINT 00
TEST PRINT XX
*B


*B
Data (LED) is blinking while warming up
WARM UP TIME 1:00
OK
BACK/C
WARM UP TIME DISPLAY
MENU
INF
COUNTER DISPLAY
△, ▽
XXXXX COUNTER DISP
XXXXX:
•COUNTER DISPLAY:
(TOTAL/DRUM/TONER/DEVE/MAINTE/COPIES)
•STAPLE COUNTER DISP:
(STAPLE/PUNCH)
•FEED COUNTER DISP:
(TRAY1/TRAY2/TRAY3,LCC1/TRAY4,LCC2/MFT/ADU)
•PROCESS COUNTER DISP:
(DRUM/TONER/DEVE/MAINTE/DRUM MOTOR TIME/
TONER MOTOR TIME/DV MOTOR TIME/PROCESS WAY/
DESTINATION)
RIGHT OUTPUT 00,000,000
TOTAL 00,000,000
TOTAL OUTPUT 00,000,000
DRUM 00,000,000
MAINTE 00,000,000
TONER 00,000,000
DEVE 00,000,000
ADU NO
ADU YES
MFT NO
MFT YES
TRAY4/LCC2 NO
TRAY4/LCC2 YES
TRAY1 NO
TRAY1 YES
TRAY2 NO
TRAY2 YES
TRAY3/LCC1 NO
TRAY3/LCC1 YES
NO/YES
FEED COUNTER CLEAR
XXXXX COUNTER CLEAR
XXXXX:
•FEED COUNTER CLEAR:
(TRAY1/TRAY2/TRAY3,LCC1/TRAY4,
LCC2/MFT/ADU)
•STAPLE COUNTER CLEAR:
(STAPLE/PUNCH)
•MNT COUNTER CLEAR:
(MAINTENANCE)
•DEVE COUNTER CLEAR:
(DEVE)
•DRUM COUNTER CLEAR:
(DRUM)
•TONER COUNTER CLEAR:
(TONER)
•COPIES COUNTER CLEAR:
(COPIES)
•TIMER DATA CLEAR:
(DRUM ROTATION/DEVE ROTATION)
Data (LED) is blinking while COUNTER DATA CLEAR execution
XXXXX YES
Executive compleated
TROUBLE CANCEL E_TBL YES
TROUBLE CANCEL E_TBL NO
TROUBLE CANCEL E_TBL
TROUBLE CANCEL X
X:
E_TBL:cancel troubles except for U2(engine mode)
E_U2:cancel U2 trouble (engine mode)
C_TBL:cancel trouble (controller mode)
Trouble canceled
Data (LED) is blinking while trouble cancel exection
Execution compleated
TRAY1 SIZE SETUP A4
TRAY1 SIZE SETUP 8.5X11
TRAY1 SIZE SETUP
XXX SIZE SETUP
XXX:
TRAY1/LCC
Value memorized
DESTINATION SETUP CANADA
DESTINATION SETUP USA
DESTINATION SETUP
Value memorized
*C


*C
MENU
INF
TRAY DETECT TYPE T2
A4
△, ▽
TRAY DETECT TYPE T2
INCH
OK
BACK/C
TRAY DETECT TYPE T2
TRAY DETECT TYPE XXX
XXX:
M:MFT
T2:TRAY2
T3:TESK1
T4:DESK2
OK
Value memorized
CE MARK SETTING
YES
CE MARK SETTING
NO
CE MARK SETTING
A3 COUNTUP MODE A
DOUBLE
A3 COUNTUP MODE A
SINGLE
COUNTUP MODE SETUP A
COUNTUP MODE SETUP X
X:
A:total counter
B:maintenance counter
C:deve counter
D:blank paper
SINGLE / DOUBLE
NO(NO COUNTUP) / YES(COUNTUP)
(Blank paper countup mode)
MNT CYCLE SETUP
40K
MNT CYCLE SETUP
50K
MNT CYCLE SETUP
DEFAULT,40K,50K,80K,100K,120K,FREE
LIFE OVER PRINT MODE
YES
LIFE OVER PRINT MODE
NO
LIFE OVER SETTING
Data (LED) is blinking while
JOGGER ADJUST execution
FINISHER JOGGER ADJ
Executive compleated
ADJUST VALUE
50
FINISHER JOGGER ADJ.
ADJUST VALUE
51
ADJUST POSITION
A4
CONSOLE FIN. SET A
11
CONSOLE FIN. SET A
10
CONSOLE FIN. SET A
CONSOLE FIN. SET X
X:
A:saddle binding position
B:saddle fold position
C:console finisher adjustment(front)
D:console finisher adjustment(rear)
E:staple position(rear)
F:staple position(front)
G:center adjustment(staple)
H:staple pitch
I:center adjustment(punch)
J:punch position
TROUBLE MEMORY MODE
ANY
TROUBLE MEMORY MODE
ONCE
MEMORY MODE SETTING
LAST JAM CODE DISP
PPD1_NMF
LAST JAM CODE DISP
*D


*D
MENU
INF
SYSTEM INFORMATION A
OK
BACK/C
△, ▽
SYSTEM INFORMATION X
X:
A:ROM version
B:machine speed
C:process type
FIRMWARE ********
PUNCH UNIT ********
BOOT ********
CONSOLE FINISHER ********
NIC ********
BUILT IN FINISHER ********
DESK ********
PROCESS DATA DISP A
PROCESS DATA DISP X
X:
A:Process control data
B:Toner control data
DV LIFE ADJ.(DB) **
DRUM ADJ.(VG) **
ENV ADJ.(PTH) **
DRUM ADJ.(LP) **
ENV ADJ.(LP) **
ENV ADJ.(VG1) **
ENV ADJ.(DB) **
ENV ADJ.(VG2) **
Select "CENTRO PORT"
Data(LED) is blinking.
CENTRO PORT CHECK
Execution completed
CENTRO PORT CHECK OK
OK or STAGE**NG
**.1-11
NIC CHECK
Select "NIC"
Data(LED) is blinking.
NIC CHECK
Execution completed
NIC CHECK OK
OK or NG
SELECT IN SIGNAL SET OFF
SELECT IN SIGNAL SET ON
Execution completed
SELECT IN SIGNAL SET ON
Data(LED) is blinking while Value memorized.
*E (Top Menu)

F. Diag mode

<table>
<tr><th>Menu</th><th>Content</th><th>Initial value</th><th>Set range</th></tr>
<tr><td>PCU DIAG MODE #</td><td>Initial screen of the diag mode

PCU DIAG MODE
#.##

*To terminate the diag mode, turn off and on the power.
*PCU ROM number is displayed in the #.</td><td></td><td></td></tr>
<tr><td>SENSOR CHECK XX</td><td>SENSOR Check mode.
Used to check the sensors of the machine and the options.
(LCD display)

LASER SYSTEM TEST

*Pressing [△] or [▽] key selects the sensor group for the Sensor check mode.

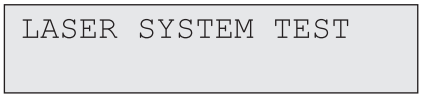
*PPD1, POD1,*POD2
POD3,*DSW1, DSW2

*Pressing [OK] key starts the selected Sensor check.
*DATA (LED) blinks during the processing
*Using [MENU] moves to the next sensor data.
*Pressing [BACK/C] key terminates the Sensor check Mode.

(Selectable sensor group)
00: Main body
<table>
<tr><td>PPD1</td><td>Paper entry sensor</td><td>POD1</td><td>Paper sensor 1</td></tr>
<tr><td>POD2</td><td>Paper exit sensor 2</td><td>POD3</td><td>Paper sensor 2</td></tr>
<tr><td>DSW1</td><td>Front door switch</td><td>DSW2</td><td>Left door switch</td></tr>
</table>
01: Multi-purpose tray
<table>
<tr><td>MCSET</td><td>Multi-purpose connection detection</td><td>MCDRS</td><td>Left side door SW</td></tr>
<tr><td>MCSS4</td><td>Vertical size detection SW4</td><td>MCSS3</td><td>Vertical size detection SW3</td></tr>
<tr><td>MCSS2</td><td>Vertical size detection SW2</td><td>MCSS1</td><td>Vertical size detection SW1</td></tr>
<tr><td>MCSPD</td><td>Remaining quantity sensor</td><td>MCLUD</td><td>Lift upper limit sensor</td></tr>
<tr><td>MCPED</td><td>Paper empty sensor</td><td>MCPFD</td><td>Sensor</td></tr>
</table>
02: ADU
<table>
<tr><td>MPLD1</td><td>Manual feed paper length sensor</td><td>APIND</td><td>ADU paper entry sensor</td></tr>
<tr><td>MPLS2</td><td>Tray collection sensor</td><td>APOD</td><td>ADU paper exit sensor</td></tr>
<tr><td>MPLS1</td><td>Tray pull-out sensor</td><td>APPD1</td><td>ADU transport sensor 1</td></tr>
<tr><td>MPED</td><td>Manual paper feed sensor</td><td>APPD2</td><td>ADU transport sensor 2</td></tr>
</table>
03: Large capacity paper feed tray
<table>
<tr><td>DRS</td><td>Left side door SW</td><td>TSD</td><td>Tandem tray installation detection</td></tr>
<tr><td>LUD2</td><td>Tandem right tray upper limit sensor</td><td>LUD1</td><td>Tandem left tray upper limit sensor</td></tr>
<tr><td>SPD2</td><td>Tandem right tray remaining quantity sensor</td><td>SPD1</td><td>Tandem left tray remaining quantity sensor</td></tr>
<tr><td>PED2</td><td>Tandem right tray paper empty sensor</td><td>PED1</td><td>Tandem left tray paper empty sensor</td></tr>
<tr><td>PFD3</td><td>Tandem horizontal transport section transport sensor</td><td>PFD2</td><td>Tandem vertical transport section transport sensor</td></tr>
</table>
When the specified sensor is active, " * "mark will appear before the sensor name.</td><td></td><td></td></tr>
</table>

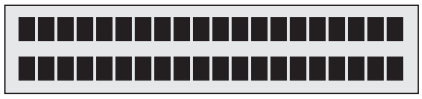
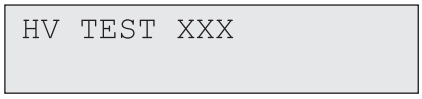
<table>
<tr><th>Menu</th><th>Content</th><th>Initial value</th><th>Set range</th></tr>
<tr><td>SENSOR CHECK XX</td><td>
SENSOR Check mode.
Used to check the sensors of the machine and the options.

(Selectable sensor group)
04: 3-tray paper feed unit
<table>
<tr><td>DRS</td><td>Left side door SW</td><td>SPD2</td><td>Multi-stage desk lower tray remaining quantity sensor</td></tr>
<tr><td>SPD1</td><td>Multi-stage desk upper tray remaining quantity sensor</td><td>CSS24</td><td>Multi-stage desk lower tray vertical size detection SW4</td></tr>
<tr><td>CSS23</td><td>Multi-stage desk lower tray vertical size detection SW3</td><td>CSS22</td><td>Multi-stage desk lower tray vertical size detection SW2</td></tr>
<tr><td>CSS21</td><td>Multi-stage desk lower tray vertical size detection SW1</td><td>LUD2</td><td>Multi-stage desk upper tray lift upper limit sensor</td></tr>
<tr><td>PED2</td><td>Multi-stage desk lower tray paper empty sensor</td><td>PFD3</td><td>Multi-stage desk lower tray transport (paper detection) sensor</td></tr>
<tr><td>CSS14</td><td>Multi-stage desk upper tray vertical size sensor</td><td>CSS13</td><td>Multi-stage desk upper tray vertical size sensor</td></tr>
<tr><td>CSS12</td><td>Multi-stage desk upper tray vertical size sensor</td><td>CSS11</td><td>Multi-stage desk upper tray vertical size sensor</td></tr>
<tr><td>LUD1</td><td>Multi-stage desk upper tray lift upper limit sensor</td><td>PED1</td><td>Multi-stage desk upper tray paper empty sensor</td></tr>
<tr><td>LUD1</td><td>Multi-stage desk upper tray lift upper limit sensor</td><td></td><td></td></tr>
</table>
05: Finisher
<table>
<tr><td>STHP</td><td>Stapler home position sensor</td><td>PSHP</td><td>Pusher home position sensor</td></tr>
<tr><td>POD</td><td>Paper exit sensor</td><td>PPD</td><td>Paper hold return sensor</td></tr>
<tr><td>SCID</td><td>Staple paper entry sensor</td><td>DSW2</td><td>Front door open/close sensor</td></tr>
<tr><td>PID</td><td>Paper entry sensor</td><td>DSW1</td><td>Right upper door open/close sensor</td></tr>
<tr><td>T2PD</td><td>Offset tray paper sensor</td><td>24VM</td><td>24V supply monitor signal</td></tr>
<tr><td>T2DN</td><td>Offset tray lower limit sensor</td><td>T1PF</td><td>Upper tray full sensor</td></tr>
<tr><td>T2UP</td><td>Offset tray upper limit sensor</td><td>STSP</td><td>Stapler staple ready sensor</td></tr>
<tr><td>JRHP</td><td>Jogger R home position sensor</td><td>STLS</td><td>Stapler staple empty sensor</td></tr>
<tr><td>JFHP</td><td>Jogger F home position sensor</td><td>STNC</td><td>Stapler cartridge empty sensor</td></tr>
<tr><td>SCID2</td><td>Staple paper entry sensor 2</td><td>DOPD</td><td>Upper cover open/close sensor</td></tr>
<tr><td>STHP2</td><td>Staple rotation home position sensor</td><td>MMLK</td><td>Main motor lock signal</td></tr>
<tr><td>STHP1</td><td>Staple rotation home position sensor</td><td>SCPD</td><td>Paper sensor</td></tr>
<tr><td>STUHP</td><td>Staple shift home position sensor</td><td></td><td></td></tr>
</table>
06: Saddle finisher
<table>
<tr><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td></td><td></td></tr>
</table>
07: Male bin stacker
<table>
<tr><td>24MV</td><td>24V detection</td><td>PFD1</td><td>Paper exit full sensor 1</td></tr>
<tr><td>DD1</td><td>Front cover open/close sensor</td><td>PFD2</td><td>Paper exit full sensor 2</td></tr>
<tr><td>DOPD</td><td>Upper cover open/close sensor</td><td>PFD3</td><td>Paper exit full sensor 3</td></tr>
<tr><td>PID</td><td>Paper entry sensor</td><td>PFD4</td><td>Paper exit full sensor 4</td></tr>
<tr><td>PPD1</td><td>Transport sensor 1</td><td>PFD5</td><td>Paper exit full sensor 5</td></tr>
<tr><td>PPD2</td><td>Transport sensor 2</td><td>PFD6</td><td>Paper exit full sensor 6</td></tr>
<tr><td>PPD3</td><td>Transport sensor 3</td><td>PFD7</td><td>Paper exit full sensor 7</td></tr>
<tr><td>PPD4</td><td>Transport sensor 4</td><td>PFD8</td><td>Paper exit full sensor 8</td></tr>
<tr><td>PPD5</td><td>Transport sensor 5</td><td></td><td></td></tr>
</table>
When the specified sensor is active, " * "mark will appear before the sensor name.
</td><td></td><td></td></tr>
<tr><td>LASER SYSTEM TEST</td><td>
LASER System Unit test.
Used to check the operation of the laser system.



*Pressing [OK] key turns on the polygonal mirror and the laser.
*DATA (LED) blinks during the processing
*When the polygonal mirror does not rotate and the cover is open, ERROR LED lights up.
When the HSYNC is properly detected, READY lights up.
</td><td></td><td></td></tr>
</table>

<table>
<tr><th>Menu</th><th>Content</th><th>Initial value</th><th>Set range</th></tr>
<tr><td>LED/LCD TEST</td><td>LED/LCD display test.
Used to check the lighting test of the operation panel LED and LCD.

*Pressing [OK] key lights up the all LEDs.
*Test is terminated 30 seconds after, or can be terminated by pressing [BACK/C] key.
(LCD display)
 
*All LCD dots will be "on" during the operation.</td><td></td><td></td></tr>
<tr><td>HV TEST XXX</td><td>High voltage test.
Used to perform the output test from the high voltage PWB.
(LCD display)
 

*Pressing [△] or [▽] key selects the high voltage unit for the testing.
*Pressing [OK] key can change the selected High voltage value.
*Using [△] or [▽] key changes the voltage.
*Pressing [OK] key starts the High voltage output.
*DATA (LED) blinks during the processing.
*After 30 seconds high voltage output is terminated.
*Pressing [BACK/C] key terminates the High voltage test.
<table><tr><th>XXX:</th><th></th></tr><tr><td>MC/GRID(xx):</td><td>Main charger / Grid bias test</td></tr><tr><td>THV+(x):</td><td>Transfer High voltage test</td></tr><tr><td>BS(xx):</td><td>Developer bias test /Volume</td></tr><tr><td>BS PLUS:</td><td>Developer bias test(cleaning mode)</td></tr><tr><td>SHV(x):</td><td>separate high voltage test</td></tr><tr><td>THV-:</td><td>transfer cleaning high voltage test</td></tr></table><table><tr><th>X</th><th></th></tr><tr><td>F</td><td>Front</td></tr><tr><td>R</td><td>Rear</td></tr></table><table><tr><th>XX</th><th></th></tr><tr><td>AE</td><td>AE mode</td></tr><tr><td>CHR</td><td>Text mode</td></tr><tr><td>MIX</td><td>Text/Photo mode</td></tr><tr><td>PHT</td><td>Photo mode</td></tr><tr><td>PRT</td><td>Printer mode</td></tr><tr><td>FAX</td><td>Fax mode</td></tr></table></td><td></td><td></td></tr>
</table>

Menu	Content	Initial value	Set range
LOAD TEST XX	**Load test mode.** Used to perform the operation test of the motors and clutches of the machine and the options. (LCD display) LOAD TEST XX *Pressing [△] or [▽] key selects the LOAD group for the Load Test mode. *Press [OK] key to determine the load operation group. *Press [MENU] key to select the load to be tested. *Pressing [OK] key starts the selected Load Test. *DATA (LED) blinks during the processing. *Pressing [BACK/C] key terminates the Load Test Mode. (Selectable Loads Group)		

00: Main body

MSWPR		VG_FAX	Grid FAX
HLPR		VG_PRT	Grid Printer
DCPR		VG_PHT	Grid Photo
MM	Main motor	VG_MIX	Grid Text/Photo
DM	Drum motor	VG_CHR	Grid Text
DSB_FW	Paper exit motor normal rotation	VG_AE	Grid AE
DSB_RV	Paper exit motor reverse rotation	THV+_BACK	Transfer voltage back
TM	Toner motor	THV+_FRONT	Transfer voltage front
CPFC	Paper cassette paper feed clutch	THV-	Transfer cleaning
RRC	Resist roller clutch	SHV_BACK	Separation voltage back
TRC	Paper transport clutch	SHV_FRONT	Separation voltage front
FGS_FIN			
TRC_DSK	Paper transport desk		
LUM	Lift-up motor		
HL1	Fusing lamp 1		
HL2	Fusing lamp 2		
BS_PLUS	Developing bias		
BS_FAX	Developing bias (FAX)		
BS_PRT	Developing bias (Printer)		
BS_PHT	Developing bias (Photo)		
BS_MIX	Developing bias (Text/Photo)		
BS_CHR	Developing bias (Text)		
BS_AE	Developing bias (AE)		
FMHi	Fan motor high speed		
FMLo	Fan motor low speed		
PSPS	Separation solenoid		

01: Multi-purpose tray

MCM	MP tray drive motor control	MCPCL	MP tray paper feed clutch
MCFCL	MP tray transport clutch	MCULM	MP lift-up motor

02: ADU (Manual paper feed section)

MPFS	Manual paper feed solenoid	MSS	Shutter solenoid
MPFC	Manual paper feed clutch		

03: ADU

ADMEN1	Upper transport motor	DGS	Gate solenoid
ADMEN2	Lower transport motor		

04: Large capacity paper feed tray

TLUM2	Tandem right tray lift-up motor	TLUM1	Tandem left tray lift-up motor
L_MCLM	Multi-purpose tray lift-up motor	TPFCL	Transport clutch
TPCL2	Tandem right tray paper feed clutch	TPCL1	Tandem left tray paper feed clutch
L_MCPCL	Multi-purpose tray paper feed clutch	TMM	Transport motor

05: 3-stage paper feed desk

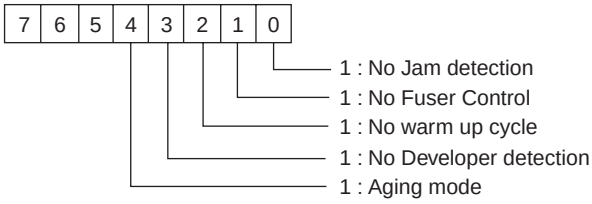
DLUM2	Multi-stage desk lower tray lift-up motor	DLUM1	Multi-stage desk upper tray lift-up motor
D_MCLM	Multi-purpose tray lift-up motor	DPFCL	Transport clutch
DPCL2	Multi-stage desk lower tray paper feed clutch	DPCL1	Multi-stage desk upper tray paper feed clutch
D_MCPCL	Multi-purpose tray paper feed clutch	DMM	Transport motor

<table>
<tr><th>Menu</th><th>Content</th><th>Initial value</th><th>Set range</th></tr>
<tr><td>LOAD TEST XX</td><td>
Load test mode.
Used to perform the operation test of the motors and clutches of the machine and the options.

(Selectable Loads Grope)
06: Finisher
<table>
<tr><td>T2S</td><td>Offset tray solenoid</td><td>STUM</td><td>Staple shift motor</td></tr>
<tr><td>T2OM</td><td>Offset tray paper exit motor</td><td>MM</td><td>Main motor</td></tr>
<tr><td>SPS</td><td>Stopper solenoid</td><td>EVM</td><td>Elevator motor</td></tr>
<tr><td>SCRS</td><td>Pressure relief solenoid</td><td>STM</td><td>Staple motor</td></tr>
<tr><td>PPS</td><td>Rear edge holding solenoid</td><td>JRM</td><td>Jogger R motor</td></tr>
<tr><td>SCGS</td><td>Staple paper entry gate solenoid</td><td>JFM</td><td>Jogger F motor</td></tr>
<tr><td>STTM</td><td>Staple rotation motor</td><td>PSM</td><td>Finisher motor</td></tr>
</table>
07: Saddle finisher
<table>
<tr><td>FFC</td><td></td><td>FRJM</td><td></td></tr>
<tr><td>FPSM</td><td></td><td>FFJM</td><td></td></tr>
<tr><td>FPNM</td><td></td><td>FAM</td><td></td></tr>
<tr><td>FLM</td><td></td><td>FPM</td><td></td></tr>
<tr><td>FFSM</td><td></td><td>FFM</td><td></td></tr>
</table>
08: Male bin stacker
<table>
<tr><td>MM</td><td>Main drive motor</td><td>MGSOL4</td><td>Gate solenoid 4</td></tr>
<tr><td>MGSOL1</td><td>Gate solenoid 1</td><td>MGSOL5</td><td>Gate solenoid 5</td></tr>
<tr><td>MGSOL2</td><td>Gate solenoid 2</td><td>MGSOL6</td><td>Gate solenoid 6</td></tr>
<tr><td>MGSOL3</td><td>Gate solenoid 3</td><td>MGSOL7</td><td>Gate solenoid 7</td></tr>
</table>
</td><td></td><td></td></tr>
<tr><td>AUTOMATIC DV ADJ.</td><td>
Automatic DV adjustment.
Used to perform the auto developer adjustment.
(LCD display)
AUTOMATIC DV ADJ.
128
*Pressing [OK] key starts the automatic DV adjustment.
*Toner control sensor value is displayed in the LCD during the operation.
*DATA (LED) blinks during the processing
*When adjustment error occurred, ERROR LED lights up.
*Adjustment value is memorized after 2 minutes DV stirring.
*Pressing [BACK/C] key terminates the adjustment mode.
</td><td></td><td></td></tr>
<tr><td>LASER OUTPUT SETUP (XXX)</td><td>
Laser output setup.
Used to set the laser output value.
Note: Do not change the factory setup on the laser output.
(LCD display)
LASER POWER SET(XX)
*Pressing [△] or [▽] key selects the LASER OUTPUT SETUP mode.
*Pressing [OK] key starts the laser output setup.
*Using [△] or [▽] key changes the value.
*Pressing [OK]key memorize the value.
*Pressing [BACK/C] key terminates the setting.
<table>
<tr><td>XX</td><td></td></tr>
<tr><td>AE</td><td>AE mode</td></tr>
<tr><td>CHR</td><td>Text mode</td></tr>
<tr><td>MIX</td><td>Text/Photo mode</td></tr>
<tr><td>PHT</td><td>Photo mode</td></tr>
<tr><td>PRT</td><td>Printer mode</td></tr>
<tr><td>FAX</td><td>Fax mode</td></tr>
</table>
</td><td></td><td></td></tr>
</table>

<table>
<tr><th>Menu</th><th>Content</th><th>Initial value</th><th>Set range</th></tr>
<tr><td>FUSER control temperature setting X</td><td>Fuser control Temperature setting.
Used to set the fusing temperature.
(LCD display)
FUSER TEMP.SETTING X
*Using [△] or [▽] key select the thermistor.
*Pressing [OK] key starts the setting.
*Using [△] or [▽] key changes the value.
*Pressing [OK] key memorize the value.
*Pressing [BACK/C] key terminates the setting.
<table><tr><td>X:</td><td></td></tr><tr><td>A:</td><td>control temperature FUSER 1</td></tr><tr><td>B:</td><td>control temperature FUSER 2</td></tr><tr><td>C:</td><td>preheat temperature FUSER 1</td></tr><tr><td>D:</td><td>preheat temperature FUSER 2</td></tr><tr><td>E:</td><td>Bypass tray control temperature FUSER 1</td></tr><tr><td>F:</td><td>Bypass tray control temperature FUSER 2</td></tr></table></td><td></td><td></td></tr>
<tr><td>SLOW UP SETTING</td><td>Process control value setting.
Used to set the process control value for each destination.
SLOW UP SETTING X
*Using [△] or [▽] key select the process control value.
*Pressing [OK] key starts the setting.
*Using [△] or [▽] key changes the value.
*Pressing [OK] key memorize the value.
*Pressing [BACK/C] key terminates the setting.
<table><tr><td>X:</td><td></td></tr><tr><td>A:</td><td>slow up adjust wait time</td></tr><tr><td>B:</td><td>Vb1-1</td></tr><tr><td>C:</td><td>Vb1-2</td></tr><tr><td>D:</td><td>Vb1-3</td></tr><tr><td>E:</td><td>Vb2-1</td></tr><tr><td>F:</td><td>Vb2-2</td></tr><tr><td>G:</td><td>Vb2-3</td></tr></table></td><td></td><td></td></tr>
</table>

<table>
<tr><th>Menu</th><th>Content</th><th>Initial value</th><th>Set range</th></tr>
<tr><td>SIZE adjstment X</td><td>SIZE adjustment .
Used to perform the size detection adjustment of the optional universal tray and the manual feed tray.
(LCD display)
SIZE ADJUSTMENT X
*Using [△] or [▽] key select the tray.
Pressing [OK] key enter the adjustment mode.
(Selectable modes)
<table><tr><td>X:</td><td></td></tr><tr><td>A:</td><td>A3 Universal tray adjustment</td></tr><tr><td>B:</td><td>Bypass tray setting</td></tr><tr><td>C:</td><td>Bypass tray adjustment</td></tr></table>
<select A>
1. Widen the guide to the MAXIMUM position.
*Pressing [OK] key starts the adjustment.
2.Narrow the guide to the MINIMUM position.
*Pressing [OK] key starts the adjustment.
*Pressing [BACK/C] key terminates the setting.
<select B>
*Pressing [OK] key displays the adjustment value.
*Using [△] and [▽] keys changes the value.
*Pressing [OK] key set the changes of the value, and moves to the next mode
*Pressing [BACK/C] key terminates the setting.
<select C>
1. Widen the guide to the MAXIMUM position.
*Pressing [OK] key starts the adjustment.
2.Guide to the P1 position.
*Pressing [OK] key starts the adjustment.
3.Guide to the P2 position.
*Pressing [OK] key starts the adjustment.
4.Narrow the guide to the MINIMUM position.
*Pressing [OK] key starts the adjustment.
*Pressing [BACK/C] key terminates the setting.</td><td></td><td></td></tr>
<tr><td>ICU PRINT MODE SET</td><td>Icu print mode setting.
ICU PRINT MODE SET
*Press [OK] key to start the setup mode.
*Press [MENU] key to shift to the next item.
*Pressing [MENU] moves to the next item
*Using [△] and [▽] keys changes the mode.
*Pressing [BACK/C] key releases the print mode set.
*Pressing [OK] key starts the print mode set.
*DATA (LED) blinks during the print mode set execution.</td><td></td><td></td></tr>
</table>

Menu	Content	Initial value	Set range
TEST PRINT XX	**Printing Test** Used to perform self-printing under the set conditions, and to adjust and check the engine set value. TEST PRINT 00 *Pressing [△] or [▽] key selects the mode. XX(select the number changed to decimal.)  Aging mode:		

Set value XX	Mode	Set value XX	Mode
0		16	Aging mode
1	No jam detection	17	Aging mode + No jam detection
2	No fusing control	18	Aging mode + No fusing control
3	No fusing control + No jam detection	19	Aging mode + No fusing control + No jam detection
4	No warm-up cycle	20	Aging mode + No warm-up cycle
5	No warm-up cycle + No jam detection	21	Aging mode + No warm-up cycle No jam detection
6	No warm-up cycle + No fusing control	22	Aging mode + No warm-up cycle + No fusing detection
7	No warm-up cycle + No fusing control + No jam detection	23	Aging mode + No warm-up cycle + No fusing detection + No jam detection
8	No DV detection	24	Aging mode + No DV detection
9	No DV detection + No jam detection	25	Aging mode + No DV detection + No jam detection
10	No DV detection + No fusing control	26	Aging mode + No DV detection + No fusing control
11	No DV detection + No fusing control + No jam detection	27	Aging mode + No DV detection + No fusing control + No jam detection
12	No DV detection + No warm-up cycle	28	Aging mode + No DV detection + No warm-up cycle
13	No DV detection + No warm-up cycle + No jam detection	29	Aging mode + No DV detection + No warm-up cycle + No jam detection
14	No DV detection + No warm-up cycle + No fusing control	30	Aging mode + No DV detection + No warm-up cycle + No fusing control
15	No DV detection + No warm-up cycle + No fusing control + No jam detection	31	Aging mode + No DV detection + No warm-up cycle + No fusing control + No jam detection

example: If you need "Aging mode" only, select "16".
If you need "Aging mode" and "No jam detection", select "17".
*Pressing [OK] key displays the setting menu for printing test.
*Pressing [MENU] moves to the next item
*Using [△] and [▽] keys changes the mode.
*Pressing [BACK/C] key releases the printing menu mode.
*Pressing [OK] key starts the printing test.
*DATA (LED) blinks during the TEST PRINT execution.

<table>
<tr><th>Menu</th><th>Content</th><th>Initial value</th><th>Set range</th></tr>
<tr><td>TEST PRINT XX</td><td>
Printing Test
Used to perform self-printing under the set conditions, and to adjust and check the engine set value.

Selection Menu:
<table>
<tr><th>LCD display</th><th>Content</th><th colspan="2">Set value</th></tr>
<tr><td>MULTI SETTING</td><td>Continuous print quantity setup</td><td colspan="2">001 - 999</td></tr>
<tr><td rowspan="8">PRINT PATTERN</td><td rowspan="8">Test print pattern</td><td colspan="2">1 - 99 (94 - 97 for production only)</td></tr>
<tr><td>1</td><td>Off center pattern</td></tr>
<tr><td>40</td><td>White copy</td></tr>
<tr><td>64</td><td>All white copy</td></tr>
<tr><td>70</td><td>Scale pattern</td></tr>
<tr><td>71</td><td>Grid pattern</td></tr>
<tr><td>75</td><td>ID: BG pattern</td></tr>
<tr><td>87</td><td>Test image pattern</td></tr>
<tr><td>CASSETTE</td><td>Cassette selection</td><td>BPT: No. 1 tray
TRAY1: No. 1 tray (STD)
TRAY2: No. 2 tray</td><td>DESK1: No. 3 tray
DESK2: No. 4 tray
LCC: LCC tray</td></tr>
<tr><td>DUPLEX</td><td>Duplex setup</td><td colspan="2">NO/USE</td></tr>
<tr><td>OUTPUT</td><td>Paper exit, finishing method setup</td><td>STD: Standard paper exit tray
JSP:
FIN1: Finisher Top
FIN2: Finisher Second
STAPLE (F): Staple front
STAPLE (R): Staple rear
STAPLE (2POS): Staple 2 positions</td><td>SADLE: Saddle
OFFSET: Offset
PUNCH: Punch
MAIL_TEST
BIN1: No. 1
~
bin-BIN8: No.8 bin</td></tr>
<tr><td>LEAD EDGE</td><td>Lead edge</td><td colspan="2">1 - 99 (mm)</td></tr>
<tr><td>LEAD EDGE VOID</td><td>Lead edge void setup</td><td colspan="2">1 - 99 (mm)</td></tr>
<tr><td>TAIL EDGE VOID</td><td>Rear edge void setup</td><td colspan="2">1 - 99 (mm)</td></tr>
<tr><td>SIDE EDGE VOID</td><td>Side edge void setup</td><td colspan="2">1 - 99 (mm)</td></tr>
<tr><td>T1 PAPER BUCKLE</td><td>Tray 1 resist quantity setup</td><td colspan="2">1 - 99</td></tr>
<tr><td>T2 PAPER BUCKLE</td><td>Tray 2 resist quantity setup</td><td colspan="2">1 - 99</td></tr>
<tr><td>T3 PAPER BUCKLE</td><td>Tray 3 resist quantity setup</td><td colspan="2">1 - 99</td></tr>
<tr><td>T4 PAPER BUCKLE</td><td>Tray 4 resist quantity setup</td><td colspan="2">1 - 99</td></tr>
<tr><td>MFT PAPER BUCKLE</td><td>Manual feed resist quantity adjustment</td><td colspan="2">1 - 99</td></tr>
<tr><td>ADU PAPER BUCKLE</td><td>Auto duplex resist quantity setup</td><td colspan="2">1 - 99</td></tr>
<tr><td>MFT OFF CENTER ADJ</td><td>Manual feed tray off-center adjustment</td><td colspan="2">0 - 99</td></tr>
<tr><td>T1 OFF CENTER ADJ</td><td>Tray 1 of-center adjustment</td><td colspan="2">0 - 99</td></tr>
<tr><td>T2 OFF CENTER ADJ</td><td>A3 universal tray off-center adjustment</td><td colspan="2">0 - 99</td></tr>
<tr><td>T3 OFF CENTER ADJ</td><td>Desk 1 tray/LCC1 off-center adjustment</td><td colspan="2">0 - 99</td></tr>
<tr><td>T4 OFF CENTER ADJ</td><td>Desk 2 tray/LCC2 off-center adjustment</td><td colspan="2">0 - 99</td></tr>
<tr><td>ADU OFF CENTER ADJ</td><td>Duplex off-center adjustment value setup</td><td colspan="2">0 - 99</td></tr>
</table>
</td><td></td><td></td></tr>
</table>

<table>
<tr><th>Menu</th><th>Content</th><th>Initial value</th><th>Set range</th></tr>
<tr><td>WARM UP TIME DISPLAY</td><td>Warm up time display mode.
Used to display the warm-up time.
(LCD display)
WARM UP TIME DISPLAY
*Pressing [OK] key enter the Warm up time display mode.
*Pressing [BACK/C] key terminates the Warm up time display mode.</td><td></td><td></td></tr>
<tr><td>COUNTER DATA DISPLAY</td><td>Counter data display.
Used to display each counter value.
(LCD display)
COUNTER DISPLAY
*Pressing the [△] or [▽] key selects the counter group for the counter display mode.
*Pressing [OK] key displays the counter value.
*Using [MENU] moves to the next item.
*Pressing [BACK/C] key terminates the Counter Display Mode.

COUNTER DISP XXXX::
<table>
<tr><td>COUNTER DISP.</td><td></td><td>PROCESS COUNTER DISP.</td><td></td></tr>
<tr><td>TOTAL</td><td>Total print quantity</td><td>DRUM</td><td>Drum counter</td></tr>
<tr><td>DRUM</td><td>Drum counter</td><td>TONER</td><td>Toner counter</td></tr>
<tr><td>TONER</td><td>Toner counter</td><td>DEVE</td><td>Developing counter</td></tr>
<tr><td>DEVE</td><td>Developing counter</td><td>MAINTE</td><td>Maintenance counter</td></tr>
<tr><td>MAINTE</td><td>Maintenance counter</td><td>DRUM MOTOR TIME</td><td>Drum motor drive time</td></tr>
<tr><td>TOTAL OUTPUT</td><td>Copy counter (Effective paper counter)</td><td>DV MOTOR TIME</td><td>Developing motor drive time</td></tr>
<tr><td>STAPLE COUTNER DISP.</td><td></td><td>PROCESS WAY</td><td>Process system</td></tr>
<tr><td>STAPLE</td><td>Staple counter</td><td>DESTINATION</td><td>Destination</td></tr>
<tr><td>PUNCH</td><td>Punch counter</td><td></td><td></td></tr>
<tr><td>FEED COUNTER DISP.</td><td></td><td></td><td></td></tr>
<tr><td>TRAY1</td><td>Paper feed tray 1 counter</td><td></td><td></td></tr>
<tr><td>TRAY2</td><td>Paper feed tray 2 counter</td><td></td><td></td></tr>
<tr><td>LCC1/TRAY3</td><td>Paper feed tray 3 counter</td><td></td><td></td></tr>
<tr><td>LCC2/TRAY4</td><td>LCC2 or paper feed tray 4 counter</td><td></td><td></td></tr>
<tr><td>MFT</td><td>Manual paper feed counter</td><td></td><td></td></tr>
<tr><td>ADJ</td><td>Duplex counter</td><td></td><td></td></tr>
</table></td><td></td><td></td></tr>
</table>

<table>
<tr><th>Menu</th><th>Content</th><th>Initial value</th><th>Set range</th></tr>
<tr><td>COUNTER DATA CLEAR</td><td>
Counter data clear.
Used to clear each counter value.
(LCD display)
XXXXX COUNTER CLEAR
*Pressing the [△] or [▽] key selects the counter group for the counter clear mode.
*Pressing [OK] key displays the counter clear group.
*Using [MENU] moves to the next mode
*Pressing the [△] or [▽] keys changes the YES or NO.
*Pressing [OK] key starts the counter data clear mode.
*Pressing [BACK/C] key terminates the counter data clear mode.

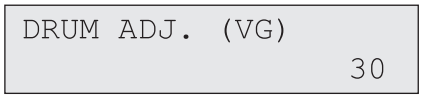
COUNTER CLEAR:
<table>
<tr><td colspan="2">FEED COUNTER CLEAR</td><td colspan="2">DEVE COUNTER CLEAR</td></tr>
<tr><td>TRAY1</td><td>Paper feed tray 1 counter</td><td>DEVE</td><td>Developing counter</td></tr>
<tr><td>TRAY2</td><td>Paper feed tray 2 counter</td><td colspan="2">DRUM COUNTER CLEAR</td></tr>
<tr><td>LCC1/TRAY3</td><td>Paper feed tray 3 counter</td><td>DRUM</td><td>Drum counter</td></tr>
<tr><td>LCC1/TRAY4</td><td>LCC1 or paper ray tray 4 counter</td><td colspan="2">TONER COUNTER CLEAR</td></tr>
<tr><td>MFT</td><td>Manual paper feed counter</td><td>TONER</td><td>Toner counter</td></tr>
<tr><td>ADU</td><td>Duplex counter</td><td colspan="2">OUTPUT COUNTER CLEAR</td></tr>
<tr><td colspan="2">STAPLE COUNTER CLEAR</td><td>TOTAL OUTPUT</td><td>Copy counter (Effective paper counter)</td></tr>
<tr><td>STAPLE</td><td>Staple counter</td><td colspan="2">TIMER DATA CLEAR</td></tr>
<tr><td>PUNCH</td><td>Punch counter</td><td>DRUM ROTATION</td><td>Drum motor RPM</td></tr>
<tr><td colspan="2">MNT COUNTER CLEAR</td><td>DEVE ROTATION</td><td>Developing motor RPM</td></tr>
<tr><td>MENTENANCE</td><td>Maintenance counter</td><td></td><td></td></tr>
</table>
</td><td></td><td></td></tr>
<tr><td>TROUBLE CANCEL X</td><td>
Trouble cancel.
Used to cancel a trouble code.
(LCD display)
TROUBLE CANCEL X
*Pressing the [△] or [▽] key selects the trouble cancel mode.
*Pressing [OK] key start the trouble cancel mode.
*Using [△] and [▽] keys changes the YES or NO.
*Pressing [OK] key starts the trouble cancel mode.
*Pressing [BACK/C] key terminates the trouble cancel mode.
<table>
<tr><td>X:</td><td></td></tr>
<tr><td>E-TBL</td><td>Cancel troubles except for U2 in the engine mode.</td></tr>
<tr><td>E-U2</td><td>Cancel U2 trouble in the engine mode.</td></tr>
<tr><td>C-TBL</td><td>Cancel trouble in the contoroller mode.</td></tr>
</table>
</td><td></td><td></td></tr>
<tr><td>XXX SIZE SETUP</td><td>
Tray size setting.
Used to set the paper size on No. 1 paper feed tray and the LCC tray.
(LCD display)
XXX SIZE SETUP
*Pressing the [△] or [▽] key select the tray.
*Pressing [OK] key displays the tray size.
*Using [△] and [▽] keys changes the tray size.
*Pressing [OK] key set the change of the tray size.
*Pressing [BACK/C] key terminates the setting.
<table>
<tr><td>XXX:</td><td></td></tr>
<tr><td>TRAY1</td><td>TRAY1</td></tr>
<tr><td>LCC</td><td>LCC</td></tr>
</table>
</td><td></td><td>Tray1
<table>
<tr><td>Set value</td></tr>
<tr><td>A4</td></tr>
<tr><td>B5</td></tr>
<tr><td>8.5"x11"</td></tr>
</table>
LCC
<table>
<tr><td>Set value</td></tr>
<tr><td>A4</td></tr>
<tr><td>8.5"x11"</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>Menu</th><th>Content</th><th>Initial value</th><th>Set range</th></tr>
<tr><td>DESTINATION SETUP</td><td>Destination setup.
Used to perform the destination setup.
(LCD display)
DESTINATION SETUP
*Pressing the [△] or [▽] key select the destination.
*Pressing [OK] key displays the destination.
*Using [△] and [▽] keys changes the destination.
*Pressing [OK] key set the change of the destination.
*Pressing [BACK/C] key terminates the setting.</td><td></td><td></td></tr>
<tr><td>TRAY DETECT TYPE xx</td><td>Tray detect type setting.
Used to select between the AB series and the inch series for size detection of each paper feed tray.
(LCD display)
TRAY DETECT TYPE XXX
*Pressing the [△] or [▽] key select the tray.
*Pressing [OK] key displays the destination.
*Using [△] and [▽] keys changes the destination.
*Pressing [OK] key set the change of the destination.
*Pressing [BACK/C] key terminates the setting.
<table><tr><th>XX:</th><th></th></tr><tr><td>M:</td><td>MFT</td></tr><tr><td>T2:</td><td>A3 Universal tray</td></tr><tr><td>T3:</td><td>Desk tray1</td></tr><tr><td>T4:</td><td>Desk tray2</td></tr></table></td><td></td><td><table><tr><th>Set value</th></tr><tr><td>AB</td></tr><tr><td>INCH</td></tr></table></td></tr>
<tr><td>CE MARK SETTING</td><td>CE mark setting.
Used to set the operation mode conforming to the CE mark.
(LCD display)
CE MARK SETTING
*Pressing [OK] key start the setting.
*Using [△] and [▽] keys changes the YES or NO.
*Pressing [OK] key memorize the CE mark mode.
*Pressing [BACK/C] key terminates the setting.</td><td></td><td><table><tr><th>Set value</th></tr><tr><td>YES</td></tr><tr><td>NO</td></tr></table></td></tr>
<tr><td>COUNTUP MODE SETUP</td><td>countup mode setup.
1.Used to set the count-up mode of A3 (11 x 17) paper.
2.Used to set whether to perform count-up of blank paper.
(LCD display)
COUNTUP MODE SETUP X
*Pressing the [△] or [▽] key select the counter mode.
*Pressing [OK] key start the setting.
*Using [△] and [▽] keys changes the countup number.
*Pressing [OK] key memorize the countup number.
*Pressing [BACK/C] key terminates the setting.
<table><tr><th>X:</th><th></th></tr><tr><td>A:</td><td>total counter A3(11X17) countup mode.</td></tr><tr><td>B:</td><td>mainte counter A3(11X17) countup mode.</td></tr><tr><td>C:</td><td>deve counter A3(11X17) countup mode.</td></tr><tr><td>D:</td><td>blank paper countup mode.</td></tr></table></td><td></td><td>A ~ C
<table><tr><th>Set value</th></tr><tr><td>SINGLE</td></tr><tr><td>DOU-BLE</td></tr></table>
D
<table><tr><th>Set value</th></tr><tr><td>NO (NO-COUNT UP)</td></tr><tr><td>YES (COU-NT UP)</td></tr></table></td></tr>
</table>

Menu	Content	Initial value	Set range
MNT CYCLE SETUP	**Maintenance cycle setup.** Used to set the maintenance cycle. (LCD display) MNT CYCLE SETUP *Pressing [OK] key displays the maintenance cycle. *Using [△] and [▽] keys changes the maintenance cycle. *Pressing [OK] key set the change of the maintenance cycle. *Pressing [BACK/C] key terminates the setting.		Set value DEFAULT 40K 50K 80K 100K 120K FREE
LIFE OVER SETTING	**Life over setting.** Used to set whether to stop printing when the developer life is over. (LCD display) LIFE OVER SETTING *Pressing [OK] key start the setting. *Using [△] and [▽] keys changes the YES or NO. *Pressing [OK] key memorize the life over mode. *Pressing [BACK/C] key terminates the setting.		Set value YES NO
FINISHER JOGGER ADJ.	**Finisher jogger adjustment.** Used to adjust the finisher (AR-FN6/FN7) jogger. For details, refer to each Service Manual of the AR-FN6/FN7. (LCD display) FINISHER JOGGER ADJ. *Press [OK] key to display the finisher jogger adjustment value. *Using [△] or [▽] key changes the value. *Press [MENU] key to display the adjustment value. *Press [△] or [▽] key to change the value. *Pressing [OK] key starts the finisher jogger adjustment. *DATA (LED) blinks during the processing. *Pressing [BACK/C] key terminates the finisher jogger adjustment.		
CONSOLE FIN. SET X	**Console finisher setting.** Used to perform the adjustments of the console finisher (AR-FN7). For details, refer to the Service Manual of the AR-FN7. (LCD display) CONSOLE FIN. SET X *Pressing the [△] or [▽] key select the console finisher mode. *Pressing [OK] key start the setting. *Using [△] and [▽] keys changes the value. *Pressing [OK] key memorize thevalue. *Pressing [BACK/C] key terminates the setting.		

<table>
<tr><th>Menu</th><th>Content</th><th>Initial value</th><th>Set range</th></tr>
<tr><td>CONSOLE FIN. SET X</td><td>Console finisher setting.
Used to perform the adjustments of the console finisher (AR-FN7).
For details, refer to the Service Manual of the AR-FN7.
<table><tr><td>X:</td><td></td></tr><tr><td>A:</td><td>saddle binding position</td></tr><tr><td>B:</td><td>saddle fold position</td></tr><tr><td>C:</td><td>console finisher adjustment (front)</td></tr><tr><td>D:</td><td>console finisher adjustment (rear)</td></tr><tr><td>E:</td><td>staple position (rear)</td></tr><tr><td>F:</td><td>staple position (front)</td></tr><tr><td>G:</td><td>center adjustment (staple)</td></tr><tr><td>H:</td><td>staple pitch</td></tr><tr><td>I:</td><td>center adjustment (punch)</td></tr><tr><td>J:</td><td>punch position</td></tr></table></td><td></td><td></td></tr>
<tr><td>TROUBLE MEM.
MODE SET</td><td>Trouble memory mode setting.
Used to set the storing method of data into memory in case of a trouble.
(LCD display)
MEMORY MODE SETTING
*Pressing [OK] key start the setting.
*Using [△] and [▽] keys changes the value.
*Pressing [OK] key memorize thevalue.
*Pressing [BACK/C] key terminates the setting.
<table><tr><th>Set value</th><th>Operation</th></tr><tr><td>ONCE</td><td>The same trouble as the previous one is not stored.</td></tr><tr><td>ANY</td><td>Any trouble is stored unconditionally.</td></tr></table></td><td></td><td><table><tr><th>Set value</th></tr><tr><td>ONCE</td></tr><tr><td>ANY</td></tr></table></td></tr>
<tr><td>LAST JAM CODE DISP</td><td>Last jam code display.
Used to display the jam history.
(LCD display)
LAST JAM CODE DISP
*Pressing [OK] key enter the last jam code display mode.
*Pressing [BACK/C] key terminates the last jam code display mode.</td><td></td><td></td></tr>
<tr><td>SYSTEM
INFORMATION X</td><td>System information dispaly.
Use to display the machine information.
(LCD display)
SYSTEM INFORMATION X
*Pressing the [△] or [▽] key selects the group.
*Pressing [OK] key displays the system information.
*Using [MENU] moves to the next item.
*Pressing [BACK/C] key terminates the system information

Mode group is:
<table><tr><td>X:</td><td></td></tr><tr><td>A:</td><td>ROM version</td></tr><tr><td>B:</td><td>machine speed</td></tr><tr><td>C:</td><td>process type</td></tr></table></td><td></td><td></td></tr>
</table>

<table>
<tr><th>Menu</th><th>Content</th><th>Initial value</th><th>Set range</th></tr>
<tr><td>PROCESS DATA DISPLAY</td><td>Process control data display.
(LCD display)
 
*Pressing the [△] or [▽] key selects the group.
*Pressing [OK] key displays the process control data.
*Using [MENU] moves to the next item
*Pressing [BACK/C] key terminates the process control data display mode.

group is:
<table><tr><td>X:</td><td></td></tr><tr><td>A:</td><td>process control data</td></tr><tr><td>B:</td><td>toner control data</td></tr></table></td><td></td><td></td></tr>
<tr><td>XXX CHECK.</td><td>Controller port check.
(LCD display)

*Pressing the [△] or [▽] key selects the port check mode.
*Pressing [OK] key start the port check.
*Pressing [BACK/C] key terminates the the port check mode.
<table><tr><td>XXX:</td><td></td></tr><tr><td></td><td>CENTRO PORT CHECK</td></tr><tr><td></td><td>NIC CHECK (network interface card check)</td></tr></table></td><td></td><td></td></tr>
<tr><td>SELECT IN SIGNAL SET</td><td>Select in signal setting.
(LCD display)

*Pressing [OK] key start the select in signal setting mode.
*Using the [△] and [▽] keys changes the ON or OFF.
*Pressing [OK] key starts the select in signal setting.
*Pressing [BACK/C] key terminates the select in signal setting mode.</td><td></td><td></td></tr>
</table>

[11] TROUBLE CODES

1.Trouble codes list

Trouble codes		Contents	Remark	Trouble detection
C1	00	MC trouble		PCU
E7	02	Laser trouble		PCU
	03	HDD trouble	With HDD installed	Controller
	06	Decode error trouble		Controller
	50	LSU connection trouble		PCU
F1	00	Finisher communication trouble	With Finisher installed	PCU
	08	Finisher staple shift motor trouble	With Finisher installed	PCU
	80	Finisher 24V power supply trouble	With Finisher installed	PCU
	87	Finisher staple rotation motor trouble	With Finisher installed	
F1	00	Mail bin stacker communication trouble	With Mail bin stacker installed	PCU
	02	mail bin stacker main drive motor trouble	With Mail bin stacker installed	PCU
	12	Mail bin stacker gate trouble	With Mail bin stacker installed	PCU
	80	Mail bin stacker 24V power supply trouble	With Mail bin stacker installed	PCU
F1	03	Console finisher paddle motor trouble	With Console Finisher installed	PCU
	06	Console finisher slide motor trouble	With Console Finisher installed	PCU
	10	Console finisher stapler motor trouble	With Console Finisher installed	PCU
	11	Console finisher bundle exit motor trouble	With Console Finisher installed	PCU
	15	Console finisher lift motor trouble	With Console Finisher installed	PCU
	19	Console finisher alignment motor trouble FRONT	With Console Finisher installed	PCU
	20	Console finisher alignment motor trouble	With Console Finisher installed	PCU
	30	Console finisher communication trouble	With Console Finisher installed	PCU
	31	Console finisher fold sensor trouble	With Console Finisher installed	PCU
	32	Console finisher punch unit communication trouble	With Console Finisher installed	PCU
	33	Console finisher punch side register motor trouble	With Console Finisher installed	PCU
	34	Console finisher punch motor trouble	With Console Finisher installed	PCU
	35	Console finisher punch side register sensor trouble	With Console Finisher installed	PCU
F1	36	Console finisher punch timing sensor trouble	With Console Finisher installed	PCU
	37	Console finisher backup RAM trouble	With Console Finisher installed	PCU
	38	Console finisher punch backup RAM trouble	With Console Finisher installed	PCU
	81	Console finisher transport motor trouble	With Console Finisher installed	PCU
F2	00	Toner concentration sensor open		PCU
	02	Toner supply abnormality		PCU
	04	Improper cartridge (Destination error, life cycle error)		PCU
	05	CRUM error		PCU
	39	Process thermistor breakdown		PCU
F3	12	Tray 1 lift-p trouble		PCU
	22	Tray 2 lift-up trouble (Multi-purpose tray)	Multi-purpose tray	PCU
H2	00	Thermistor open (HL1)		PCU
	01	Thermistor open (HL2)		PCU
H3	00	Heat roller high temperature detection (HL1)		PCU
	01	Heat roller high temperature detection (HL2)		PCU
H4	00	Heat roller low temperature detection (HL1)		PCU
	01	Heat roller low temperature detection (HL2)		PCU
H5	01	5-time continuous POD1 not-reaching JAM detection		PCU
L4	01	main motor lock detection		PCU
	02	Drum motor lock detection		PCU
L6	10	Polygon motor lock detection		PCU
L8	01	No full-wave signal		PCU
	02	Full-wave signal width abnormality		PCU
U6	00	Desk/LCC communication trouble	With Paper feed desk installed	PCU
	01	Desk/LCC1CS lift-up trouble (Multi-purpose tray)	With Paper feed desk installed	PCU
	02	Desk2 CS lift-up trouble/LCC1 lift-up trouble	With Paper feed desk installed	PCU
	03	Desk3 CS lift-up trouble/LCC2 lift-up trouble	With Paper feed desk installed	PCU
	10	Desk/LCC transport motor trouble	With Paper feed desk installed	PCU
EE	EL	Auto developer adjustment trouble (Over-toner)	Only during DIAG	PCU
	EU	Auto developer adjustment trouble (Under-toner)	Only during DIAG	PCU
F9	02	Centro port check error		Controller
	03	NIC port check error		Controller
U1	01	Battery abnormality	With FAX board installed	Controller
U2	00	EEPROM read/write error (Controller)		Controller
	11	Counter check sum error (Controller EEPROM)		Controller

Trouble codes		Contents	Remark	Trouble detection
U2	12	Adjustment value check sum error (Controller EEPROM)		Controller
	90	PCU section EEPROM read/ write error		PCU
	91	PCU section memory sum check error		PCU
U7	00	PC/MODEM communication error		Controller
PF	--	RIC copy inhibit command reception		Controller
CH	--	Door open (CH ON)		PCU
	00	No developer cartridge		PCU
	01	No toner cartridge		PCU
--	--	Auditor not ready		Controller
PC	--	Personal counter not installed		Controller

2.Details of trouble codes

MAIN	SUB		
C1	00	Content	MC trouble
		Detail	Main charger output abnormality (Output open) Trouble signal is outputted from the high voltage transformer.
		Cause	The main charger is not installed properly. The main charger is not assembled properly. Disconnection of connector of high voltage transformer. High voltage harness disconnection or breakage.
		Check and remedy	Use the diag mode or DIAG to check the main charger output. Check for disconnection of the main charger. Replace the high voltage unit.
E7	02	Content	Laser trouble
		Detail	BD signal from LSU is kept OFF, or ON.
		Cause	The connector of LSU or the harness in LSU is disconnected or broken. The polygon motor does not rotate normally. The laser home position sensor in LSU is shifted. The proper voltage is not supplied to the power line for laser. Laser emitting diode trouble PCU PWB trouble Controller PWB trouble
		Check and remedy	Check for disconnection of the LSU connector. Use DIAG (SIM 61-1) to check LSU operation. Check that the polygon motor rotates normally or not. Check light emission of laser emitting diode. Replace the LSU unit. Replace the PCU PWB. Replace the Controller PWB.
E7	03	Content	HDD trouble
		Detail	HDD does not operate properly in the machine with HDD installed.
		Cause	HDD is not installed properly to the Controller PWB. HDD does not operate properly in the Controller PWB. Controller PWB trouble
		Check and remedy	Check installation of HDD to the Controller PWB. Check connection of the harness of HDD to the Controller PWB. Use DIAG (SIM 62-2, -3) to check read/write of HDD. Replace HDD. Replace Controller PWB.
	06	Content	Decode error trouble
		Detail	A decode error occurs during making of an image.
		Cause	Data error during input from PCI to PM. PM trouble Data error during image compression/ transfer. Controller PWB abnormality
		Check and remedy	Check insertion of the PWB. (PCI bus) If the error occurred in a FAX job, check installation of the FAX PWB. For the other cases, check the Controller PWB. Replace the Controller PWB.
	50	Content	LSU connection trouble
		Detail	An LSU which does not conform to the machine is installed.
		Cause	PCU PWB trouble LSU trouble
		Check and remedy	Check LSU PWB. Check PCU PWB. Check connection of the connector and the harness between PCU and LSU.
F1	00	Content	Finisher communication trouble
		Detail	Communication cable test error after turning on the power or exiting from DIAG. Communication error with the finisher
		Cause	Improper connection or disconnection of connectors and harness between the machine and the finisher. Finisher control PWB trouble Control PWB (PCU) trouble Malfunction by noises
		Check and remedy	Canceled by turning OFF/ON the power. Check connectors and harness in the communication line. Replace the finisher control PWB or PCU PWB.
	08	Content	Finisher staple shift motor trouble
		Detail	Staple motor drive trouble
		Cause	Motor lock Motor rpm abnormality Overcurrent to the motor Finisher control PWB trouble
		Check and remedy	Use DIAG (SIM3-3) to check operations of the staple motor.

MAIN	SUB		
F1	80	Content	Finisher power abnormality
		Detail	The 24V power is not supplied to the finisher PWB.
		Cause	Improper connection or disconnection of connector and harness Finisher control PWB trouble Power unit trouble
		Check and remedy	Use DIAG (SIM3-2) to check the sensor.
	87	Content	Finisher staple rotation motor trouble
		Detail	Front staple rotation motor trouble
		Cause	Motor lock Motor rpm abnormality Overcurrent to the motor Finisher control PWB trouble
		Check and remedy	Use DIAG (SIM3-3) to check the motor operation.
F1	00	Content	Mail box communication trouble
		Detail	Communication cable test error after turning on the power or exiting from DIAG. Communication error with the mail box.
		Cause	Improper connection or disconnection of connector and harness between the machine and the mail box. Mail box control PWB trouble Control PWB (PCU) trouble Malfunction by noises
		Check and remedy	Canceled by turning OFF/ON the power. Check harness and connector in the communication line. Replace the mail box PWB or PCU PWB.
	02	Content	Mail box transport motor abnormality
		Detail	Transport motor trouble
		Cause	Motor lock Motor rpm abnormality Overcurrent to the motor Mail box control PWB trouble
		Check and remedy	Use DIAG (SIM3-21) to check the transport motor operation.
	12	Content	Mail box gate trouble
		Detail	Gate operation abnormality
		Cause	Gate lock Mail box control PWB trouble
		Check and remedy	Use DIAG (SIM3-21) to check the transport gate operation.
	80	Content	Finisher power abnormality
		Detail	The 24V power is not supplied to the finisher PWB.
		Cause	Improper connection or disconnection of connector and harness Finisher control PWB trouble Power unit trouble
		Check and remedy	Use DIAG (SIM3-20) to check the sensor operation.

MAIN	SUB		
F1	03	Content	Console finisher paddle motor trouble
		Detail	Paddle motor operation abnormality
		Cause	Motor lock Motor rpm abnormality Overcurrent to the motor Console finisher control PWB trouble
		Check and remedy	Use DIAG (SIM3-3) to check the motor operation.
	06	Content	Console finisher slide motor trouble
		Detail	Slide motor operation abnormality
		Cause	Motor lock Motor rpm abnormality Overcurrent to the motor Console finisher control PWB trouble
		Check and remedy	Use DIAG (SIM3-3) to check the motor operation.
	10	Content	Console finisher stapler motor trouble
		Detail	Stapler motor operation abnormality
		Cause	Motor lock Motor rpm abnormality Overcurrent to the motor Console finisher control PWB trouble
		Check and remedy	Use DIAG (SIM3-3) to check the motor operation.
	11	Content	Console finisher bundle exit motor trouble
		Detail	Bundle exit motor operation abnormality
		Cause	Motor lock Motor rpm abnormality Overcurrent to the motor Console finisher control PWB trouble
		Check and remedy	Use DIAG (SIM3-3) to check the motor operation.
	15	Content	Console finisher lift motor trouble
		Detail	Lift motor operation abnormality
		Cause	Motor lock Motor rpm abnormality Overcurrent to the motor Console finisher control PWB trouble
		Check and remedy	Use DIAG (SIM3-3) to check the motor operation.
	19	Content	Console finisher front alignment motor trouble
		Detail	Front alignment motor operation abnormality
		Cause	Motor lock Motor rpm abnormality Overcurrent to the motor Console finisher control PWB trouble
		Check and remedy	Use DIAG (SIM3-3) to check the motor operation.
	20	Content	Console finisher rear alignment motor trouble
		Detail	Rear alignment motor operation abnormality
		Cause	Motor lock Motor rpm abnormality Overcurrent to the motor Console finisher control PWB trouble
		Check and remedy	Use DIAG (SIM3-3) to check the motor operation.

MAIN	SUB		
F1	30	Content	Console finisher communication trouble
		Detail	Communication cable test error after turning on the power or exiting from DIAG. Communication error with the console finisher
		Cause	Improper connection or disconnection of connector and harness between the machine and the console finisher. Console finisher control PWB trouble Control PWB (PCU) trouble Malfunction by noises
		Check and remedy	Canceled by turning OFF/ON the power. Check connectors and harness in the communication line. Replace the console finisher control PWB or PCU PWB.
	31	Content	Console finisher fold sensor trouble
		Detail	Sensor input value abnormality
		Cause	Sensor breakage harness breakage Console finisher control PWB trouble
		Check and remedy	Use DIAG (SIM3-2) to check the sensor operation.
	32	Content	Communication trouble between the console finisher and the punch unit.
		Detail	Communication err between the console finisher and the punch unit.
		Cause	Improper connection or disconnection of connector and harness between the console finisher and the punch unit. Console finisher control PWB trouble Control PWB (PCU) trouble Malfunction by noise
		Check and remedy	Canceled by turning OFF/ON the power. Check connectors and harness in the communication line. Replace the console finisher control PWB.
	33	Content	Console finisher punch side registration motor trouble
		Detail	Punch side registration motor operation abnormality
		Cause	Motor lock Motor rpm abnormality Overcurrent to the motor Console finisher control PWB trouble
		Check and remedy	Use DIAG (SIM3-3) to check the motor operation.
	34	Content	Console finisher punch motor trouble
		Detail	Punch motor operation abnormality
		Cause	Motor lock Motor rpm abnormality Overcurrent to the motor Console finisher control PWB trouble
		Check and remedy	Use DIAG (SIM3-3) to check the motor operation.
	35	Content	Console finisher punch side registration sensor trouble
		Detail	Sensor input value abnormality
		Cause	Sensor breakage Harness disconnection Console finisher control PWB trouble
		Check and remedy	Use DIAG (SIM3-2) to check the sensor operation.

MAIN	SUB		
F1	36	Content	Console finisher punch timing sensor trouble
		Detail	Sensor input value abnormality
		Cause	Sensor breakage Harness disconnection Console finisher control PWB trouble
		Check and remedy	Use DIAG (SIM3-2) to check the sensor operation.
	37	Content	Console finisher backup RAM trouble
		Detail	Backup RAM contents are disturbed.
		Cause	Console finisher control PWB trouble Malfunction by noise
		Check and remedy	Replace the console finisher control PWB.
	38	Content	Console finisher punch backup RAM trouble
		Detail	Punch unit backup RAM contents are disturbed.
		Cause	Punch control PWB trouble Malfunction by noise
		Check and remedy	Replace the punch control PWB.
	81	Content	Console finisher transport motor abnormality
		Detail	Transport motor trouble
		Cause	Motor lock Motor rpm abnormality Overcurrent to the motor Console finisher control PWB trouble
		Check and remedy	Use DIAG (SIM3-3) to check the motor operation.
F2	00	Content	Toner control sensor abnormality
		Detail	Toner control sensor output open
		Cause	Connector harness trouble Connector disconnection
		Check and remedy	Check connection of the toner control sensor. Check connection of connector and harness to the main PWB. Check for disconnection of harness.
	02	Content	Toner supply abnormality
		Detail	Toner control sensor output value becomes under-toner too earlier.
		Cause	Connector harness trouble Toner control sensor trouble
		Check and remedy	Check connection of the connector in the toner motor section. Check connection of connector and harness to the main PWB. Check for disconnection of harness. Toner control sensor output check DIAG (SIM25-1)
	04	Content	Improper cartridge (life cycle error, etc.)
		Detail	An improper process cartridge is inserted.
		Cause	IC chip trouble Improper cartridge
		Check and remedy	Insert a proper cartridge.
	05	Content	CRUM error
		Detail	Communication with IC chip cannot be made.
		Cause	IC chip trouble Improper cartridge
		Check and remedy	Insert a proper cartridge.

MAIN	SUB		
F2	39	Content	Process thermistor trouble
		Detail	Process thermistor open
		Cause	Process thermistor trouble Process thermistor harness disconnection PCU PWB trouble
		Check and remedy	Check connection of harness and connector of the process thermistor. Check PCU PWB.
F3	12	Content	Machine no. 1 tray lift-up trouble
		Detail	PED does not turn ON in the specified time. LUD does not turn ON in the specified time.
		Cause	PED/LUD trouble No. 1 tray lift-up trouble Check connection of harness between the PCVU PWB, lift-up unit, and paper feed unit.
		Check and remedy	Check PED, LUD, and their harness and connectors. Check the lift-up unit.
	22	Content	Machine No. 2 tray lift-up trouble
		Detail	MCPED does not turn ON in the specified time. MCLUD does not turn ON in the specified time.
		Cause	MCPED/MCLUD trouble No. 2 tray lift-up motor trouble Harness disconnection f the PCU PWB, the lift-up unit, and the paper feed unit.
		Check and remedy	Check MCPED, PCLUD, and their harness and connectors. Check the lift-up unit.
H2	00…HL1 (RT H1) 01…HL2 (RT H2)	Content	thermistor open Fusing unit not installed
		Detail	Thermistor is open. (An input voltage of 2.92V or above is detected.) Fusing unit not installed
		Cause	Thermistor trouble Control PWB trouble Fusing section connector disconnection AC power trouble Fusing unit not installed
		Check and remedy	Check harnesses and connectors from the thermistor to the control PWB. Use DIAG (SIM14) to clear the self diag display.
H3	00…1HL1 (RT H1) 01…HL2 (RT H2)	Content	Fusing section high temperature trouble
		Detail	The fusing temperature exceeds 242°C. (An input voltage of 0.27V or above is detected.)
		Cause	thermistor trouble Control PWB trouble Fusing section connector disconnection AC power trouble
		Check and remedy	Use DIAG (SIM5-2) to check the heater lamp **Blinking operation.** If the heater lamp blinks normally: Check the thermistor and its harness. Check the thermistor input circuit in the control PWB. **If the heater lamp keep lighting:** Check the AC PWB and the lamp control circuit in the control PWB. Use DIAG (SIM14) to cancel the trouble

MAIN	SUB		
H4	00…1HL1 (RT H1) 01…HL2 (RT H2)	Content	Fusing section low temperature trouble
		Detail	•The set temperature is not reached within the specified time (normally 3 min) when warming up or resetting from pre-heating. •Under the ready state. (An input voltage of 1.21V or below is detected 5 times continuously.)
		Cause	thermistor trouble Heater lamp trouble Control PWB trouble Thermostat trouble AC power trouble Interlock switch trouble
		Check and remedy	Use DIAG (SIM5-2) to check the heater lamp **Blinking operation.** If the heater lamp blinks normally: Check the thermistor and its harness. Check the thermistor input circuit in the control PWB. **If the heater lamp does not light:** Check for heater lamp disconnection and thermostat disconnection. Check the interlock switch. Check the AC PWB and the lamp control circuit in the control PWB. Use DIAG (SIM14) to cancel the trouble.
H5	01	Content	5-time continuous POD1 not-reaching jam detection
		Detail	5-time continuous POD1 not-reaching jam detection
		Cause	A fusing section jam is not properly removed. (Jam paper remains.) POD1 sensor trouble, or harness disconnection Improper installation of fusing unit
		Check and remedy	Check jam paper in the fusing section. (winding, etc.) Check POD1 sensor harness, and check installation the fusing unit. Use DIAG (SIM14) to cancel the trouble.
L4	01	Content	Main motor lock detection
		Detail	The motor lock signal is detected for 1.5sec during rotation of the main motor.
		Cause	main motor trouble Check connection of harness between the PCU PWB and the main motor. Control circuit trouble
		Check and remedy	Use DIAG (SIM25-1) to check the main motor operation. Check harness and connector between the PCU PWB and the main motor.
	02	Content	Drum motor lock detection
		Detail	The motor lock signal is detected for 1.5sec during rotation of the drum motor.
		Cause	Drum motor trouble Improper connection of harness between the PCU PWB and the drum motor. Control circuit trouble
		Check and remedy	Use DIAG (SIM25-1) to check the drum motor operation. Check harness and connector between the PCU PWB and the drum motor.

MAIN	SUB		
L6	10	Content	Polygon motor lock detection
		Detail	It is judged that the polygon motor lock signal is not outputted. Lock signal is checked in the interval of 10sec after starting the polygon motor, and it is judged that the polygon motor does not rotate normally.
		Cause	The LSU connector or harness in the LSU is disconnected or broken. Polygon motor trouble
		Check and remedy	Use DIAG (SIM61-1) to check the polygon motor operation. Check connector and harness connection. Replace LSU.
L8	01	Content	No fullwave signal
		Detail	Full wave signal is not detected.
		Cause	The PCU PWB connector or the power unit harness is disconnected or broken. PCU PWB trouble Power unit trouble
		Check and remedy	Check connection of the harness and connector. Replace PCU PWB. Replace the power unit.
	02	Content	Full wave signal width abnormality
		Detail	It is judged as frequency abnormality of full wave signal. (When the detection cycle is judged as 69Hz or above or 42.5Hz or below)
		Cause	The connector or harness of the PCU PWB and the power PWB is disconnected. PCU PWB trouble Power unit trouble
		Check and remedy	Check connection of the harness and connector. Replace the PCU PWB. Replace the power unit.
U6	00	Content	Desk/LCC communication trouble
		Detail	Desk/LCC communication error Communication cable test error after turning on the power or exiting DIAG.
		Cause	Improper connection or disconnection of connector and harness Desk control PWB trouble Control PWB (PCU) trouble Malfunction by noise
		Check and remedy	Canceled by turning OFF/ON the power. Check connection of the harness and connector in the communication line.
	01	Content	Desk/LCC No. 1 tray lift-up trouble
		Detail	Desk/LCC No. 1 tray lift-up trouble
		Cause	Sensor trouble Desk control PWB trouble Gear breakage Lift-up motor trouble
		Check and remedy	Use DIAG (SIM4-2) to check the lift-up sensor detection. Use DIAG (SIM4-3) to check the lift-up motor operation.

MAIN	SUB		
U6	02	Content	Desk No. 2 tray/LCC1 lift-up trouble
		Detail	Desk No. 2 tray/LCC lift-up trouble
		Cause	Sensor trouble Desk control PWB trouble Gear breakage Lift-up motor trouble
		Check and remedy	Use DIAG (SIM4-2) to check the lift-up sensor detection. Use DIAG (SIM4-3) to check the lift-up motor operation.
	03	Content	Desk No. 3 tray/LCC2 lift-up trouble
		Detail	Desk no. 3 tray lift-up trouble
		Cause	Sensor trouble Desk control PWB trouble Gear breakage Lift-up motor trouble
		Check and remedy	Use DIAG (SIM4-2) to check the lift-up sensor detection. Use DIAG (SIM4-3) to check the lift-up motor operation.
	10	Content	Desk/LCC transport motor trouble
		Detail	Desk/LCC transport motor operation trouble
		Cause	Motor lock Motor rpm abnormality Overcurrent to the motor Desk control PWB trouble
		Check and remedy	Use DIAG (SIM4-3) to check the transport motor operation.
EE	EL	Content	Auto developer adjustment trouble (Over-toner)
		Detail	The sample data is of 68 or below when auto developer adjustment is performed.
		Cause	Toner concentration sensor trouble Charging voltage, developing voltage abnormality Insufficient toner concentration Developing unit trouble PCU PWB trouble
		Check and remedy	Use DIAG (SIM25-2) to perform auto developer adjustment.
	EU	Content	Auto developer adjustment trouble (Under-toner)
		Detail	The sample data is of 168 or above when auto developer adjustment is performed.
		Cause	Insufficient toner concentration Charging voltage, developing voltage abnormality Insufficient toner concentration Developing unit trouble PCU PWB trouble
		Check and remedy	Use DIAG (SIM25-2) to perform auto developer adjustment.
F9	02	Content	PRT Centro port check error
		Detail	Controller Centro port trouble
		Cause	Centro port trouble Controller PWB trouble
		Check and remedy	Replace the Controller PWB.
	03	Content	NIC port check error
		Detail	NIC port check error
		Cause	NIC port trouble NIC PWB trouble Controller PWB trouble
		Check and remedy	Replace the NIC PWB. Replace the Controller PWB.

MAIN	SUB		
U1	01	Content	Battery abnormality
		Detail	Backup SRAM battery voltage fall
		Cause	Battery life Battery circuit abnormality
		Check and remedy	Check that the battery voltage is about 2.5V or above. Check the battery circuit.
U2	00	Content	EEPROM read/write error (Controller)
		Detail	EEPROM write error
		Cause	EEPROM trouble EEPROM is not initialized. Controller PWB EEPROM access circuit trouble
		Check and remedy	Check that EEPROM is properly inserted. Save the counter/adjustment values with the DIAG simulation. Use DIAG (SIM16) to cancel U2 trouble. Replace the Controller PWB.
	11	Content	Counter check sum error (Controller)
		Detail	Counter data area check sum error
		Cause	EEPROM trouble Control circuit trouble by noise Controller PWB EEPROM access circuit trouble
		Check and remedy	Check that EEPROM is properly inserted. Save the counter/adjustment values with the DIAG simulation. Use DIAG (SIM16) to cancel U2 trouble. Replace the Controller PWB.
	12	Content	Adjustment value check sum error (Controller)
		Detail	Adjustment data area check sum error
		Cause	EEPROM trouble Control circuit trouble by noise Controller PWB EEPROM access circuit trouble
		Check and remedy	Check that EEPROM is properly inserted. Save the counter/adjustment values with the DIAG simulation. Use DIAG (SIM16) to cancel U2 trouble. Replace the Controller PWB.
	90	Content	EEPROM read/write error (Controller)
		Detail	PCU EEPROM write error
		Cause	EEPROM trouble EEPROM is not initialized. PCU PWB EEPROM access circuit trouble
		Check and remedy	Check that EEPROM is properly inserted. Save the counter/adjustment values with the DIAG simulation. Use DIAG (SIM16) to cancel U2 trouble. Replace the Controller PWB.
	91	Content	Memory check sum error (PCU)
		Detail	PCU memory check sum error
		Cause	EEPROM trouble EEPROM is not initialized. PCU PWB EEPROM access circuit trouble Uninitialized E2PROM installed.
		Check and remedy	Check that EEPROM is properly inserted. Save the counter/adjustment values with the DIAG simulation. Use DIAG (SIM16) to cancel U2 trouble. Replace the Controller PWB.

MAIN	SUB		
U7	00	Content	RIC communication trouble
		Detail	RIC communication trouble Communication cable test error after turning on the power or exiting DIAG.
		Cause	Disconnection of connector and harness RTC control PWB trouble Control PWB (Controller) trouble Malfunction by noise
		Check and remedy	Canceled by turning OFF/ON the power. Check connector and harness in the communication line.
PF	00	Content	RIC copy inhibit signal is received.
		Detail	Copy inhibit command from RIM (host) is received.
		Cause	Judged by the host.
		Check and remedy	Inform to the host.

3.Halt of operation in trouble

A. Troubles where the machine can be operated depending on the conditions (Include Multi Function)

Trouble	Judgment block	Trouble code	Operation-possible mode					
			Copy read (interruption, etc.)	FAX send	Email send	FAX print	Print	List print
(SPF trouble)	SCANNER	U5	△1	△1	△1	O	O	O
Scanner section troubles (Mirror motor, lens, copy lamp)	SCANNER	L1,L3,U2 (80,81)	X	X	X	O	O	O
(AE trouble)	-	L9	△2	△2	△2	O	O	O
(ADU trouble)	PCU	U4	△3	O	O	△3	△3	△3
FAX board trouble	Controller/ FAX	F6,F7	O	X	O	X	O	O
FAX power OFF	Controller		O	X	O	X	O	O
Staple trouble	PCU	F1(10)	△4	O	O	△4	△4	△4
Paper feed tray trouble	PCU	F3, U6 (Desk)	△5	O	O	△5	△5	△5
(Process control trouble)	PCU		△6	O	O	△6	△6	△6
PCU section troubles (Motor, fusing, etc.)	PCU		X	O	O	X	X	X
After-work trouble	PCU		△9	O	O	△9	△9	△9
Laser trouble	PCU	E7 (02 only), L6	X	O	O	X	X	X
HDD trouble	Controller	E7 (03)	X	X	X	X	X	X
CCD troubles (Shading, etc.)	SCANNER	E7 (10, 11, 13)	X	X	X	O	O	O
Scanner communication trouble	Controller	E7 (80)	X	X	X	O	O	O
PCU communication trouble	Controller	E7 (90)	X	O	O	X	X	X
Printer port trouble	Controller	F9	O	O	△11	O	△11	O
Backup battery voltage fall	Controller	U1 (01)	O	X	X	O	O	O
Memory trouble (Expansion RAM not installed, etc.)	Controller	U2 (00, 11, 12)	X	X	X	X	X	X
External communication invalid (RIC)	Controller	U7, PF	X	X	X	X	X	X
Image memory trouble, decode error	Controller	E7(01, 06)	X	X	X	X	X	X

O : Operation possible X : Operation impossible △ : Operation possible depending on conditions

△1 :Operation possible in the OC mode
△2 :Operation possible in the manual mode
△3 :Single mode only
△4 :Operation possible except for the staple mode
△5 :Operation possible except for the trouble tray
△6 :Operation possible if the image can be limited
△8 :Original/list print possible after reception
△9 :Operation possible except for the trouble paper exit section
△10 :Operation possible by use of memory only
△11 :Operation possible if the used port (NIC, Centro) is normal

B. Trouble mode process

Machine operation possible depending on conditions	Operations except for the trouble mode are possible (READY). For the mode where operations are impossible, only setup can be allowed, and the message is provided to show that operations are impossible. (NOT READY in this case.) **(Display)** A dialog is shown in case of a trouble. For the mode where operations are possible, the OK button is added to the message. For the mode where operations are impossible, the OK button is not shown, and the process to cancel is indicated.
Machine operation is impossible	The trouble display is always shown, and all setup operations are invalid.

C. Writing to the trouble memory

In this series, the simulation (diag) allows to select whether the same trouble is written to the trouble memory when it occurs. If the DIAG simulation is set as above, when any trouble occurs, its hysteresis is written to the trouble memory. DIAG(SIM 26-35)

0: The same trouble as the previous one is not recorded. (Default)
1: When a trouble occurs, it is written to the trouble memory without exception.

CAUTION FOR BATTERY REPLACEMENT

(Danish) ADVARSEL !
Lithiumbatteri – Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri
af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandoren.

(English) Caution !
Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type
recommended by the manufacturer.
Dispose of used batteries according to manufacturer's instructions.

(Finnish) VAROITUS
Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan
tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden
mukaisesti.

(French) ATTENTION
Il y a danger d'explosion s' il y a remplacement incorrect
de la batterie. Remplacer uniquement avec une batterie du
même type ou d'un type équivalent recommandé par
le constructeur.
Mettre au rebut les batteries usagées conformément aux
instructions du fabricant.

(Swedish) VARNING
Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent
typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens
instruktion.

(German) Achtung
Explosionsgefahr bei Verwendung inkorrekter Batterien.
Als Ersatzbatterien dürfen nur Batterien vom gleichen Typ oder
vom Hersteller empfohlene Batterien verwendet werden.
Entsorgung der gebrauchten Batterien nur nach den vom
Hersteller angegebenen Anweisungen.

SHARP

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SHARP PARTS GUIDE

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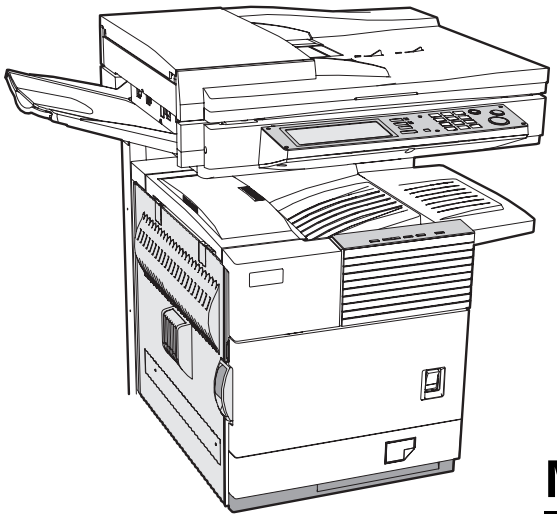

LASER PRINTER (MULTI FUNCTION)

MODEL AR-M350
AR-M450
OPTION: AR-EF1
AR-M11
AR-RK1

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The AR-M350 / AR-M450 Parts Guide describes only the parts change from AR-P350 / AR-P450 Parts Guide. for the common parts,please refer to the AR-P350 / AR-P450(CODE : 00ZAR350LPP1/) Parts Guide.

SHARP CORPORATION

This document has been published to be used for after sales service only.
The contents are subject to change without notice.

DEFINITION

The definition of each Rank is as follows and also noted in the list

A : Parts necessary to be stocked as High usage parts.

B : Parts necessary to be stocked as Standard usage parts.

C : Low usage parts.

D : Parts necessary for refurbish.

E : Unit parts recommended to be stocked for efficient after sales service.
Please note that the lead time for the said parts may be longer than normal parts.

S : Consumable parts.

Please note that the following parts used in Copier under the same description are classified into A or B Rank depending upon the place used.

Example: Gear made of Metal, Sprocket, Bearing, Belt made of Rubber, Spring clutch mechanism.

A Rank : The parts which may be with the revolution or loading.

B Rank : Parts similar to A Rank parts, but are not included in Rank A.

Because parts marked with "⚠" is indispensable for the machine safety maintenance and operation, it must be replaced with the parts specific to the product specification.

○ Other than this Parts Guide, please refer to documents Service Manual (including Circuit Diagram) of this model.

○ Please use the 13 digit code described in the right hand corner of front cover of the document, when you place an order.

○ For U.S. only-Use order codes provided in advertising literature. Do not order from parts department.

[Note] ∗ These parts are supplied by SMF.

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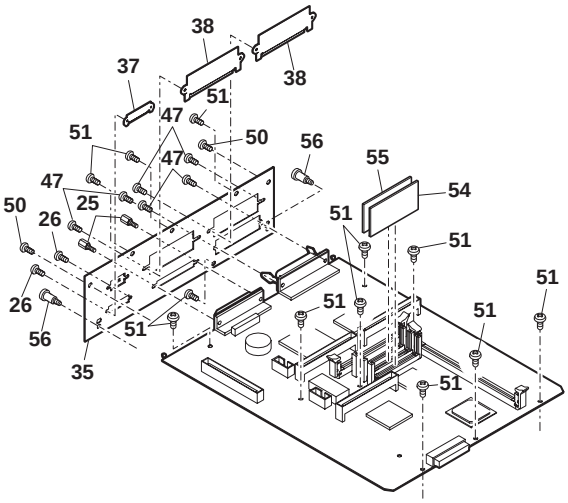
1 Exteriors

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
5	GCAB−0940FCZ2	BA	N	D	Paper exit tray exterior
11	HPNLC0243FCZ1	AP	N	D	Operation cabinet
26	CPNLH0020QS12	AK	N	D	Model panel M350 [ARM350]
	CPNLH0020QS13	AK	N	D	Model panel M450 [ARM450]
	CPNLH0020QS22	AK	N	D	Model panel 350M [AR350M]
	CPNLH0020QS23	AK	N	D	Model panel 450M [AR450M]

12 Controller BOX unit

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
25	LX−BZ0921FCZ1	AE	N	C	Scanner Screw
26	XBPSD26P06000	AA		C	Screw (2.6×6)
35	LPLTM5765FCZ1	AH	N	C	Control joint plate
37	PCÕVP1560FCZZ	AC	N	C	FAX I/F cover
38	PCÕVP1557FCZZ	AC		C	LAN/option cover
47	XBPSD30P06000	AA		C	Screw (3×6)
50	XHBSE30P06000	AA		C	Screw (3×6)
51	XBBSD30P06000	AA		C	Screw (3×6)
54	VHi28F322L01F	BE	N	B	MFP flash ROM A J (28F322L01F) [Japan]
	VHi28F322L03F	BF	N	B	MFP flash ROM A EX (28F322L03F) [except Japan]
55	VHi28F322L02F	BF	N	B	MFP flash ROM B J (28F322L02F) [Japan]
	VHi28F322L04F	BL	N	B	MFP flash ROM B EX (28F322L04F) [except Japan]
56	LX−BZ0828FCZZ	AD		C	Handle fixing screw

12 Controller BOX unit



FCP05045

17 Packing material & Accessories

	NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
		SPAKC6122DS18	AU	N	D	Packing case	[ARM350][STCL,SRS,SRSSC]
		SPAKC6122DS19	AU	N	D	Packing case	[ARM350][China]
		SPAKC6122DS17	AU	N	D	Packing case	[ARM350][other countries]
	5	SPAKC6122DS21	AU	N	D	Packing case	[ARM450][STCL,SRS,SRSSC]
		SPAKC6122DS22	AU	N	D	Packing case	[ARM450][China]
		SPAKC6122DS20	AU	N	D	Packing case	[ARM450][other countries]
		SPAKC6118DS12	AU	N	D	Packing case	[AR350M][Japan]
		SPAKC6118DS13	AU	N	D	Packing case	[AR450M][Japan]
		PSHEP4927FCZZ	AM	N	D	Key sheet	[French]
		PSHEP4927FCZ1	AR	N	D	Key sheet	[Germany]
		PSHEP4927FCZ2	AM	N	D	Key sheet	[Spanish]
		PSHEP4927FCZ3	AR	N	D	Key sheet	[Italian]
		PSHEP4927FCZ4	AR	N	D	Key sheet	[Dutch]
		PSHEP4927FCZ5	AR	N	D	Key sheet	[Swedish]
	13	PSHEP4927FCZ6	AR	N	D	Key sheet	[Norwegian]
		PSHEP4927FCZ7	AR	N	D	Key sheet	[Finnsh]
		PSHEP4927FCZ8	AR	N	D	Key sheet	[Danish]
		PSHEP4927FCZ9	AR	N	D	Key sheet	[Hungarian]
		PSHEP4927FC10	AR	N	D	Key sheet	[Czechoslovakia]
		PSHEP4927FC11	AR	N	D	Key sheet	[Polish]
		TiNSE2181FCZZ	AT	N	D	Operation manual	[USA]
		TiNSJ2076FCZZ	AQ	N	D	Operation manual COPY	[Japan]
		TiNSE2077FCZZ	AQ	N	D	Operation manual COPY	[USA]
		TiNSE2078FCZZ	AW	N	D	Operation manual COPY	[English]
		TiNSF2079FCZZ	AW	N	D	Operation manual COPY	[French]
*		TiNSG2080GHZZ	AS	N	D	Operation manual COPY	[German]
*		TiNSE2081GHZZ	AS	N	D	Operation manual COPY	[U Kingdom]
		TiNSS2082FCZZ	AW	N	D	Operation manual COPY	[Spanish]
*		TiNSi2083GHZZ	AS	N	D	Operation manual COPY	[Italian]
*		TiNSH2084GHZZ	AS	N	D	Operation manual COPY	[Dutch]
		CiNSR2085FC51	AS	N	D	Operation manual COPY	[Russian]
		CiNSZ2086FC51	AS	N	D	Operation manual COPY	[Arabic]
		TiNSE2087FCZZ	AX	N	D	Operation manual COPY	[Hong Kong]
*		TiNSW2089GHZZ	AS	N	D	Operation manual COPY	[Swedish]
*		TiNSZ2090GHZZ	AS	N	D	Operation manual COPY	[Norwegian]
*		TiNSZ2091GHZZ	AS	N	D	Operation manual COPY	[Finnsh]
*		TiNSD2092GHZZ	AS	N	D	Operation manual COPY	[Danish]
*		TiNSZ2093GHZZ	AS	N	D	Operation manual COPY	[Hungarian]
*		TiNSZ2094GHZZ	AS	N	D	Operation manual COPY	[Czechoslovakia]
*	20	TiNSZ2095GHZZ	AS	N	D	Operation manual COPY	[Polish]
		TiNSJ2118FCZZ	AN	N	D	Operation manual SCANNER	[Japan]
		TiNSE2119FCZZ	AN	N	D	Operation manual SCANNER	[USA]
		TiNSE2120FCZZ	AV	N	D	Operation manual SCANNER	[English]
		TiNSF2121FCZZ	AV	N	D	Operation manual SCANNER	[French]
*		TiNSG2122GHZZ	AS	N	D	Operation manual SCANNER	[German]
*		TiNSE2123GHZZ	AS	N	D	Operation manual SCANNER	[U Kingdom]
		TiNSS2124FCZZ	AV	N	D	Operation manual SCANNER	[Spanish]
*		TiNSi2125GHZZ	AS	N	D	Operation manual SCANNER	[Italian]
*		TiNSH2126GHZZ	AS	N	D	Operation manual SCANNER	[Dutch]
		CiNSR2127FC51	AR	N	D	Operation manual SCANNER	[Russian]
		CiNSZ2128FC51	AR	N	D	Operation manual SCANNER	[Arabic]
		TiNSE2129FCZZ	AV	N	D	Operation manual SCANNER	[Hong Kong]
*		TiNSW2131GHZZ	AS	N	D	Operation manual SCANNER	[Swedish]
*		TiNSZ2132GHZZ	AS	N	D	Operation manual SCANNER	[Norwegian]
*		TiNSZ2133GHZZ	AS	N	D	Operation manual SCANNER	[Finnsh]
*		TiNSD2134GHZZ	AS	N	D	Operation manual SCANNER	[Danish]
*		TiNSZ2135GHZZ	AS	N	D	Operation manual SCANNER	[Hungarian]
*		TiNSZ2136GHZZ	AS	N	D	Operation manual SCANNER	[Czechoslovakia]
*		TiNSZ2137GHZZ	AS	N	D	Operation manual SCANNER	[Polish]

26 MFP Control PWB (ARM350/M450/350M/450M/ARM11)

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
1	PCAPH0010GCZZ	AD		D	Jumper (JM-2W-96)	[JP2,3,4,5,6,7]
2	PCŌVP1468FCZZ	AD		D	FAX battery cover	
3	QCNCM0041QSZZ	AP		C	Connector (TX25-100P12)	[CN2,9,12]
4	QCNCM1146FCZZ	AE	N	C	Connector (9A12-1034)	[CN14]
5	QCNCM1148FCZZ	AP	N	C	Connector (TX25100P6ST)	[CN16]
6	QCNCW0946FCZZ	AH		C	Connector (36pin)	[CN1]
7	QCNCW1147FCZZ	AL	N	C	Connector (TX2450RLTH1)	[CN13]
8	QCNCW1149FCZZ	AN	N	C	Connector (8AL068S305C)	[CN8]
9	QFS-D132CQCZZ	AG		A	Fuse (1.25/250T)	[F1]
10	QFSHB0028FCZZ	AC		C	Fuse holder (TP00351-31)	[F1]
11	QPiN-0003GCZZ	AC		C	Pin (T3B-SQ)	[JP2,3,4,5,6,7,]
12	QSŌCZ0001QSZZ	AL		C	Socket (DMM168-FLAA2-3A133)	[CN3]
13	QSŌCZ0073FCZZ	AL		C	Connector (72pin)	[CN4,5,6]
14	QSŌCZ0079FCZZ	AN		C	Connector (100pin)	[AR350M/450M][CN7]
15	QSŌCZ6428ACZZ	AE		C	IC socket (28pin)	[IC36]
16	RCRSP6676RCZZ	AG		B	Crystal (32.768KHz)	[X6]
17	RCRUA0005FCZZ	AP		B	Crystal (14.745)	[X7]
18	RCRUA0007FCZZ	AP		B	Crystal (31.554)	[X4]
19	RCRUA0008FCZZ	AP		B	Crystal (40.57M)	[X2]
20	RCRUA0009FCZZ	AP		B	Crystal (66.666MHZ)	[X3,5]
21	RCRUA0012FCZZ	AP		B	Crystal (66M)	[X1]
22	RFiLN0048FCZZ	AC		C	Coil (BLM10B121SB)	[L2,3]
23	RFiLN0051FCZZ	AC	N	C	Coil (MMZ1608D121B)	[L25~30,33,34]
24	RMPTR4100ACZZ	AB		B	Block resistor (10Ω×4)	[BR6~13,15~25,28,29]
	RMPTR4100ACZZ	AB		B	Block resistor (10Ω×4)	[BR33~44,46,48,53~72]
25	RMPTR4103ACZZ	AB		B	Block resistor (10KΩ×4)	[BR1~5,14,26,27,30,31,32]
	RMPTR4103ACZZ	AB		B	Block resistor (10KΩ×4)	[BR74,76,78,80~102]
26	RMPTR4330ACZZ	AB		B	Block resistor (33Ω×4)	[BR47,49,50,51,73,75,77,79]
27	RMPTR4472ACZZ	AB		B	Block resistor (4.7KΩ×4)	[BR52,45]
28	UBATi0014FCZZ	AN		B	Battery (CR2477-H01)	[BT1]
29	VCCCCZ1HH101J	AA		C	Capacitor (50WV 100pF)	[C7,8,10,17,18,20,22,30,33]
	VCCCCZ1HH101J	AA		C	Capacitor (50WV 100pF)	[C35,38,39,40,43,47,48,51]
30	VCCCCZ1HH220J	AA		C	Capacitor (50WV 22pF)	[C61]
31	VCEAPH1HC105M	AC		C	Capacitor (50WV 1μF)	[C181,188,205,206]
32	VCEAPS1AC227M	AD		C	Capacitor (10WV 220μF)	[C309,310]
33	VCEAPS1CC106M	AC		C	Capacitor (16WV 10μF)	[C1,6,21,75,94,111,125,165]
	VCEAPS1CC106M	AC		C	Capacitor (16WV 10μF)	[C166,169,178,179,223,224]
34	VCEAPS1CC226M	AC		C	Capacitor (16WV 22μF)	[C57,64,90,114,115,136,170,176]
35	VCEAPS1CC476M	AC		C	Capacitor (16WV 47μF)	[C95,167,168,180]
36	VCKYCZ1CF104Z	AB		C	Capacitor (16WV 0.10μF)	[C3,9,11,12,13,14,23~29]
	VCKYCZ1CF104Z	AB		C	Capacitor (16WV 0.10μF)	[C31,32,34,36,37,41,42,44,45]
	VCKYCZ1CF104Z	AB		C	Capacitor (16WV 0.10μF)	[C46,49,50,52,53,54,55,56]
	VCKYCZ1CF104Z	AB		C	Capacitor (16WV 0.10μF)	[C58,59,60,62,63,65,66,67]
	VCKYCZ1CF104Z	AB		C	Capacitor (16WV 0.10μF)	[C68,70,71,72,73,74,76~82]
	VCKYCZ1CF104Z	AB		C	Capacitor (16WV 0.10μF)	[C85,86,87,88,89,91,92,93]
	VCKYCZ1CF104Z	AB		C	Capacitor (16WV 0.10μF)	[C96,97,98,99,100,102~108]
	VCKYCZ1CF104Z	AB		C	Capacitor (16WV 0.10μF)	[C110,112,113,116~124,126]
	VCKYCZ1CF104Z	AB		C	Capacitor (16WV 0.10μF)	[C127,128,130,131,132,133]
	VCKYCZ1CF104Z	AB		C	Capacitor (16WV 0.10μF)	[C134,135,137,139,140~145]
	VCKYCZ1CF104Z	AB		C	Capacitor (16WV 0.10μF)	[C149,151,153~164,172,173]
	VCKYCZ1CF104Z	AB		C	Capacitor (16WV 0.10μF)	[C177,182,183,185,186,187]
	VCKYCZ1CF104Z	AB		C	Capacitor (16WV 0.10μF)	[C189~199,201,202,204]
	VCKYCZ1CF104Z	AB		C	Capacitor (16WV 0.10μF)	[C208~222,235~262]
	VCKYCZ1CF104Z	AB		C	Capacitor (16WV 0.10μF)	[C264~279,292~303]
37	VCKYCZ1HB102K	AA		C	Capacitor (50WV 1000pF)	[C129]
38	VCKYCZ1HF103Z	AA		C	Capacitor (50WV 0.01μF)	[C69,109]
39	VHDDAP202U/-1	AB		B	Diode (DAP202U)	[D7,10]
40	VHDRB451F//-1	AD		B	Diode (RB451F)	[D12,14,20,21]
41	VHDRLS73///-1	AA		B	Diode (RLS73)	[D8,9]
42	VHi65946P07-1	BA		B	IC (65946P07)	[IC32]
43	VHi74LCX08MTC	AE		B	IC (74LCX08MTC)	[IC46,26]
44	VHi74LCX14MTC	AE		B	IC (74LCX14MTC)	[IC43]
45	VHi74LCX244MT	AG		B	IC (74LCX244MT)	[IC12]
46	VHi74LCX32MTC	AE		B	IC (74LCX32MTC)	[IC11]
47	VHi74LVX16128	AP		B	IC (74LVX16128)	[IC15]
48	VHi90LV17AW-1	AP		B	IC (90LV17AW)	[IC18]
49	VHiDS14C238//	AT		B	IC (DS14C238)	[IC42]
50	VHiEEP64-120P	AW		B	IC (EEP64-120P)	[IC36]
51	VHiHG73C095-1	AY		B	IC (HG73C095)	[IC53]
52	VHiKS0U1347-1	BN		B	IC (KS0U1347)	[IC19]
53	VHiLCX157MT-1	AG		B	IC (LCX157MT)	[IC14]
54	VHiLCX16244-1	AM		B	IC (LCX16244)	[IC21,49,50]
55	VHiLCX16245-1	AM		B	IC (LCX16245)	[IC16,24,31,51,52]
56	VHiLCX16373-1	AM		B	IC (LCX16373)	[IC34]
57	VHiLCX74MTC-1	AE		B	IC (LCX74MTC)	[IC10]
58	VHiLM393D++-1	AE		B	IC (LM393D)	[IC39]
59	VHiLVT240MT-1	AL		B	IC (LVT240MT)	[IC8]
60	VHiM87J4810-1	BK		B	IC (M87J4810)	[IC25]
61	VHiN2370R04-1	AF		B	IC (N2370R04)	[IC23]
62	VHiN2370R33-1	AF		B	IC (N2370R33)	[IC54]

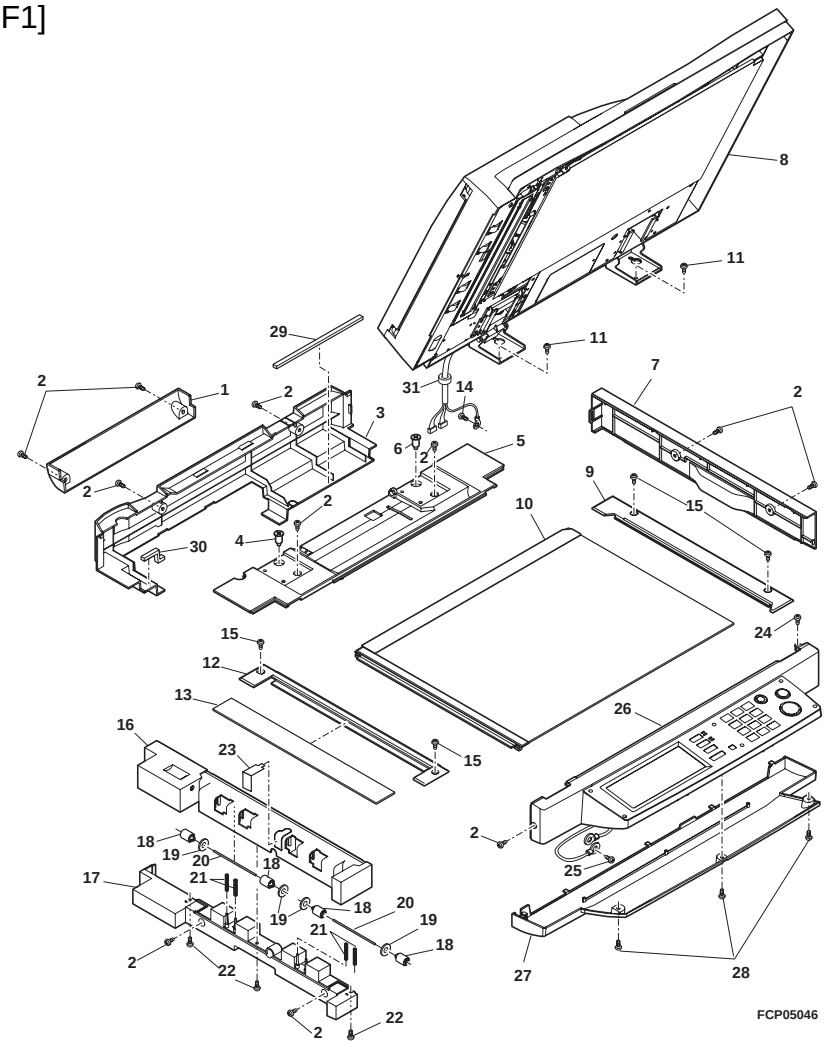
26 MFP Control PWB (ARM350/M450/350M/450M/ARM11)

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
63	VHiN2391D25-1	AG		B	IC (N2391D25)	[IC35,33]
64	VHiNJM317DL-1	AK		B	IC (NJM317DL)	[IC2]
65	VHiNJU6356E-1	AK		B	IC (NJU6356E)	[IC40]
66	VHiPi6C2309-1	AR		B	IC (PI6C2309)	[IC9,29]
67	VHiPM2500++-1	BP		B	IC (PM2500)	[IC13]
68	VHiPST598DN-1	AF		B	IC (PST598DN)	[IC47]
69	VHiPST598iN-1	AF		B	IC (PST598I)	[IC48]
70	VHiSD4M16L1-1	AZ		B	IC (SD4M16L1)	[IC22]
71	VHiSD8M16L1-1	BB		B	IC (SD8M16L1)	[IC4,5,6,7,27]
72	VHiSR1024-7LL	AU		B	IC (SR1024-7LL)	[IC55,56]
73	VHiT4955A20-1	BF		B	IC (T4955A20)	[IC20]
74	VHiTD62503F-1	AF		B	IC (TD62503F)	[IC38,41,44,45]
75	VHP1LHEE-002A	AC		B	LED (Red) (1LHEE-002A)	[D13]
76	VHV1608C080-1	AC		B	Varistor (1608C080)	[RV1~6]
77	VHViCPS1.2/-1	AF		B	IC protecrot (ICPS1.2)	[Q1]
78	VRS-CZ1JD000J	AA		C	Resistor (1/16W 0Ω ±5%)	[R1,3,32,33,49,77,94,97,106]
	VRS-CZ1JD000J	AA		C	Resistor (1/16W 0Ω ±5%)	[R108,120,141,166,198,220,222]
	VRS-CZ1JD000J	AA		C	Resistor (1/16W 0Ω ±5%)	[R225,229,232,233,290~307]
	VRS-CZ1JD000J	AA		C	Resistor (1/16W 0Ω ±5%)	[R310~348,399,400,406]
	VRS-CZ1JD000J	AA		C	Resistor (1/16W 0Ω ±5%)	[R407,409,410,413,414]
79	VRS-CZ1JD100J	AA		C	Resistor (1/16W 10Ω ±5%)	[R36,59,64,65,96,116,118,126]
	VRS-CZ1JD100J	AA		C	Resistor (1/16W 10Ω ±5%)	[R127,136,137,149,161,170,177,185]
80	VRS-CZ1JD101J	AA		C	Resistor (1/16W 100Ω ±5%)	[R9,10,101,102,109,180]
	VRS-CZ1JD101J	AA		C	Resistor (1/16W 100Ω ±5%)	[R181,183,235,236]
81	VRS-CZ1JD102J	AA		C	Resistor (1/16W 1.0KΩ ±5%)	[R11,129,130,134,151,204]
	VRS-CZ1JD102J	AA		C	Resistor (1/16W 1.0KΩ ±5%)	[R205,243,244,253,268,279]
82	VRS-CZ1JD103J	AA		C	Resistor (1/16W 10KΩ ±5%)	[R12,13,15,16,18,20,44,45]
	VRS-CZ1JD103J	AA		C	Resistor (1/16W 10KΩ ±5%)	[R60,61,62,70,72,73,86,91]
	VRS-CZ1JD103J	AA		C	Resistor (1/16W 10KΩ ±5%)	[R93,112,115,123,131,139]
	VRS-CZ1JD103J	AA		C	Resistor (1/16W 10KΩ ±5%)	[R144,154,158,159,160,163]
	VRS-CZ1JD103J	AA		C	Resistor (1/16W 10KΩ ±5%)	[R165,167,168,203,207,208]
	VRS-CZ1JD103J	AA		C	Resistor (1/16W 10KΩ ±5%)	[R213,216,217,230,237,238]
	VRS-CZ1JD103J	AA		C	Resistor (1/16W 10KΩ ±5%)	[R239,240,241,242,245,246]
	VRS-CZ1JD103J	AA		C	Resistor (1/16W 10KΩ ±5%)	[R249,254,259,260,261,263]
	VRS-CZ1JD103J	AA		C	Resistor (1/16W 10KΩ ±5%)	[R264,267,269,271,272,273]
	VRS-CZ1JD103J	AA		C	Resistor (1/16W 10KΩ ±5%)	[R274,282,283,284,285]
83	VRS-CZ1JD183J	AA		C	Resistor (1/16W 18KΩ ±5%)	[R275,280]
84	VRS-CZ1JD220J	AA		C	Resistor (1/16W 22Ω ±5%)	[R14,17,19,24,27,30,31,34]
	VRS-CZ1JD220J	AA		C	Resistor (1/16W 22Ω ±5%)	[R35,37,39,40,43,46,51,54]
	VRS-CZ1JD220J	AA		C	Resistor (1/16W 22Ω ±5%)	[R57,247,252]
85	VRS-CZ1JD221J	AA		C	Resistor (1/16W 220Ω ±5%)	[R403,404]
86	VRS-CZ1JD222J	AA		C	Resistor (1/16W 2.2KΩ ±5%)	[R199,200,209,210,211,212]
	VRS-CZ1JD222J	AA		C	Resistor (1/16W 2.2KΩ ±5%)	[R218,223,248,265,266,276]
87	VRS-CZ1JD330J	AA		C	Resistor (1/16W 33Ω ±5%)	[R25,38,41,47,48,52,56,58,66]
	VRS-CZ1JD330J	AA		C	Resistor (1/16W 33Ω ±5%)	[R67,68,69,92,117,138,142]
	VRS-CZ1JD330J	AA		C	Resistor (1/16W 33Ω ±5%)	[R143,147,148,152,153,173]
	VRS-CZ1JD330J	AA		C	Resistor (1/16W 33Ω ±5%)	[R174,175,176,187,188,]
	VRS-CZ1JD330J	AA		C	Resistor (1/16W 33Ω ±5%)	[R214,288,289]
88	VRS-CZ1JD332J	AA		C	Resistor (1/16W 3.3KΩ ±5%)	[R215,119]
89	VRS-CZ1JD333J	AA		C	Resistor (1/16W 33KΩ ±5%)	[R179,107]
90	VRS-CZ1JD470J	AA		C	Resistor (1/16W 47Ω ±5%)	[R53,55,308,309]
91	VRS-CZ1JD472J	AA		C	Resistor (1/16W 4.7KΩ ±5%)	[R63,71,74,76,87,100,111,121]
	VRS-CZ1JD472J	AA		C	Resistor (1/16W 4.7KΩ ±5%)	[R122,124,128,133,146,162,164]
	VRS-CZ1JD472J	AA		C	Resistor (1/16W 4.7KΩ ±5%)	[R184,206,221,224,226,227,228]
	VRS-CZ1JD472J	AA		C	Resistor (1/16W 4.7KΩ ±5%)	[R231,250,251,262,270,277]
92	VRS-CZ1JD511J	AA		C	Resistor (1/16W 510Ω ±5%)	[R278]
93	VRS-CZ1JD750J	AA		C	Resistor (1/16W 75Ω ±5%)	[R114,145]
94	VRS-CZ1JD823J	AA		C	Resistor (1/16W 82KΩ ±5%)	[R202]
95	VSDTC114EK/-1	AB		B	Transistor (DTC114EK)	[Q3]
96	VSDTC114YK/-1	AC		B	Transistor (DTC114YK)	[Q4]
97	VSUPA502T//-1	AD		B	Transistor (UPA502T)	[Q5,6,7]

27 Exteriers[AR-EF1]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
1	GCAB−0943FCZZ	AK	N	D	Rear lower cabinet	
2	XHBSE40P08000	AA		C	Screw (4×8)	
3	PCŌVP1566FCZZ	AS	N	D	Upper cabinet rear cover	
4	LX−BZ0842FCZZ	AG		C	SPF screw	
5	GCAB−0942FCZZ	AP	N	D	Upper cabinet rear	
6	LX−BZ0776FCZZ	AG		C	Screw R	
7	GCAB−0945FCZZ	AR	N	D	Upper cabinet right	
8	DUNT−7133DSZZ	CZ	N	E	DSPF unit	
	DUNT−7132DSZZ	CY	N	E	SPF unit	
9	LFiX−0544FCZZ	AG	N	D	Glass fixing right	
10	CGLSP0003RS51	BC	N	B	Table glass	(Japan)
	CGLSP0003RS52	BF	N	B	Table glass EX	(Except Japan)
11	XBTSC50P16000	AA		C	Screw (5×16)	
12	LFiX−0543FCZZ	AG	N	D	Glass fixing left	
13	CGLSP0102DS51	BF	N	B	White datum glass unit	
14	XHBSD30P06000	AA		C	Screw (3×6)	
15	XBTSE40P06000	AA		C	Screw (4×6)	
16	PGiDM1900FCZZ	AR	N	C	Delivery upper PG SPF	
17	PGiDM1901FCZZ	AQ	N	C	Delivery lower PG	
18	NRŌLP0011QSZZ	AD		C	Delivery support roller	
19	PSPŌ−0001QSZZ	AB		C	Sponge	
20	NSFTZ2601FCZZ	AH	N	C	Delivery support roller shaft 1	
21	MSPRC2865FCZ1	AB	N	C	Delivery support spring	
22	XEBSE30P08000	AA		C	Screw (3×8)	
23	PCŌVP1624FCZZ	AC	N	D	Stanp cover	
24	LX−BZ0465FCZZ	AA		C	Screw (4×6)	
25	XHBSD30P08000	AA		C	Screw (3×8)	
26	CPNLC0244DS51	CV	N	D	MFP operation panel	(Japan)
	CPNLC0244DS52	CT	N	D	MFP operation panel	(Except Japan)
27	LDAiU0627FCZZ	AZ	N	D	Operation base	
28	XEBSE40P08000	AA		C	Screw (4×8)	
29	PMLT−1256FCZZ	AC	N	C	Dustproof cushion 1	
30	PMLT−1257FCZZ	AB	N	C	Dustproof cushion 2	
31	RCŌRF0041FCZZ	AH	N	C	Core (UFR25-12-15)	

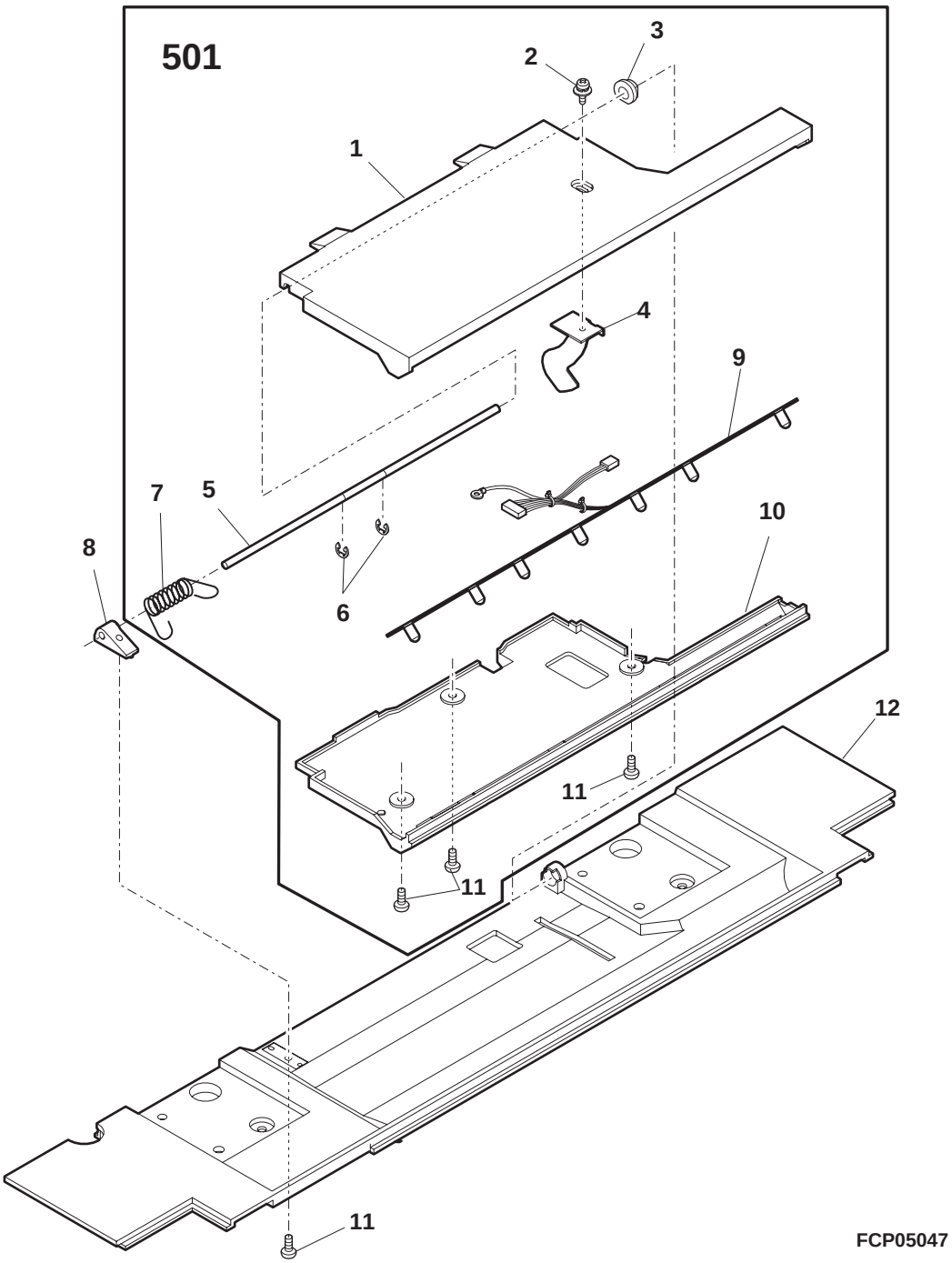
27 Exteriers[AR-EF1]



28 Original detect unit[AR-EF1]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	MARMP0148FCZ2	AK	N	C	Original detect arm lower
2	XBPSD30P06KS0	AA		C	Screw (3×6KS)
3	LBSHZ1102CCZZ	AC		C	Rubber roller bushing 1
4	PSLDH0178FCZZ	AD		C	Original detect shield plate
5	NSFTZ1805FCZZ	AE		C	Original detect fulcrum shaft
6	XRESP30−06000	AA		C	E type ring
7	MSPRT1563FCZZ	AC		C	Original detect spring
8	LHLDZ1085FCZ2	AD	N	C	Original detect fulcrum TIG
9	CPWBF1453FCE1	BN	N	E	ORS emission PWB
10	MARMP0147FCZ2	AK	N	C	Original detect arm upper
11	XEPSD30P05000	AA		C	Screw (3×5)
12	GCAB−0942FCZZ	AP	N	D	Upper cabinet rear
501	CARMP0147DS51	BA	N	E	ORS emission unit

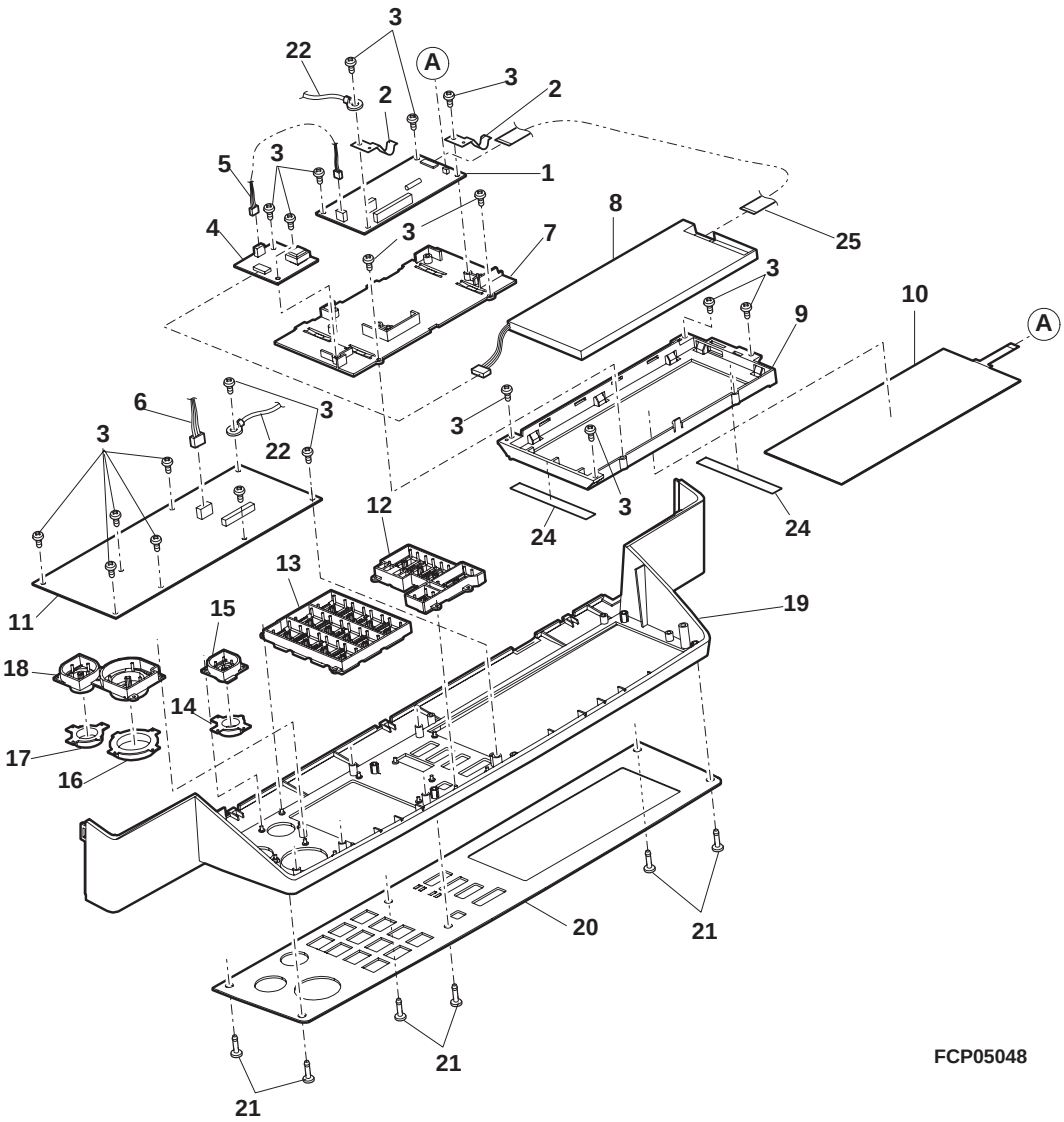
28 Original detect unit[AR-EF1]



29 Operation panel unit[AR-EF1]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	CPWBN1471FCE1	BF	N	E	LVDS PWB
2	MSPRP3009FCZZ	AD	N	C	LCD earth plate spring
3	XEPSD30P08000	AA		C	Screw (3×8)
4	CPWBF1470DS51	BN	N	E	Inverter PWB
5	DHAi-3192FCZZ	AD	N	C	INV interface harness
6	DHAi-3191FCZZ	AF	N	C	ORS PD harness
7	LHLDZ1459FCZZ	AE	N	C	LCD holder B
8	VVLLM065HB1-1	CB	N	B	LCD mojule
9	LHLDZ1458FCZZ	AF	N	C	LCD holder A
10	HPNLH0246FCZZ	BF	N	D	Touch panel
11	CPWBF1469FCE1	BN	N	E	MFP OPE PWB
12	CBTN-0253FC01	AN	N	E	Change key Assy
13	CBTN-0252FC01	AP	N	E	Ten key Assy
14	CFiLW0284FC01	AF	N	D	C key smoke Assy
15	CBTN-0251FC01	AF	N	E	C key Assy
16	CFiLW0282FC01	AF	N	D	Copy key smoke Assy
17	CFiLW0283FC01	AF	N	D	CA key smoke Assy
18	CBTN-0250FC01	AH	N	E	Copy key Assy
19	HPNLC0244FCZZ	AZ	N	D	Operation panel A
20	CPNLC0245FC01	AY	N	D	Operation panel B (Japan)
	CPNLC0245FC02	AY	N	D	Operation panel B EX-E (Except Japan)
21	LPiNS0014QSGZ	AC	N	C	Fixing pin C
22	DHAi-3193FCZZ	AC	N	C	Panel earth harness
24	PSHEZ4906FCZZ	AC	N	C	Touch panel sheet
25	QCNW-0166FCZZ	AE	N	C	LCD interface FFC

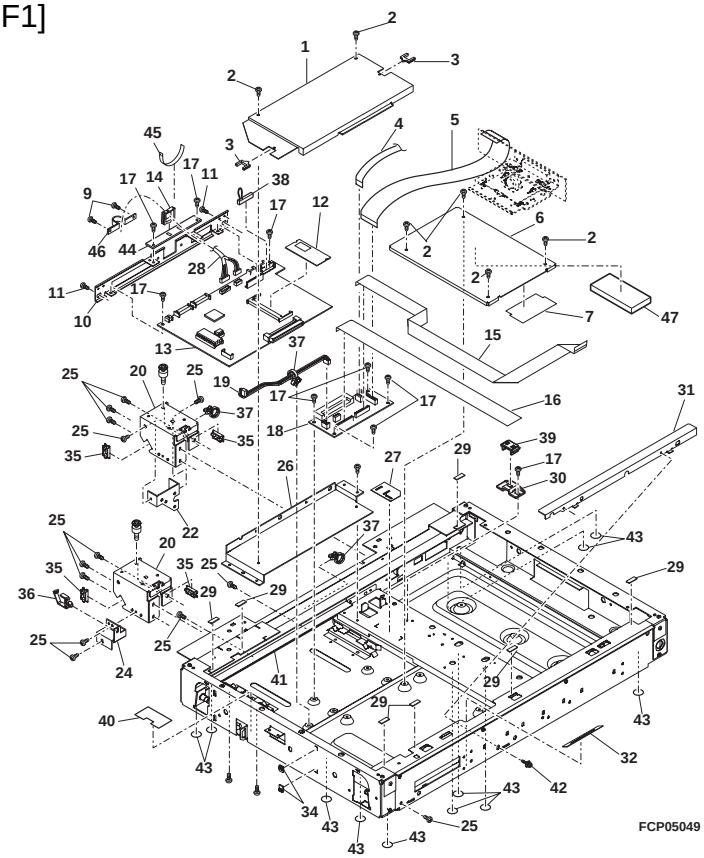
29 Operation panel unit[AR-EF1]



30 Optical unit 1[AR-EF1]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	PCŌVP1599FCZZ	AG	N	D	Harness cover B
2	XHBSD30P04000	AA		C	Screw (3×4)
3	LHLDW1115FCZZ	AD		C	Edge bushing
4	QCNW-0168FCZZ	AE	N	C	CL interface FFC
5	QCNW-0167FCZZ	AM	N	C	CCD interface FFC
6	PCŌVP1600FCZZ	AF	N	D	Harness cover C
7	PSHEP4932FCZZ	AD	N	C	Harness fixing sheet 4
9	XBBSE30P06000	AA		C	Screw (3×6)
10	LPLTM5723FCZZ	AG	N	C	SCN PWB fixing plate
11	XHBSE40P08000	AA		C	Screw (4×8)
12	VHi28F081L02C	BB	N	B	Scanner flash unit
13	CPWBN1450FCE1	BF	N	E	Scanner control PWB
14	LHLDW1115FCZZ	AD		C	Edge bushing
15	QCNW-0165FCZZ	AH	N	C	MFPOP interface FFC
16	QCNW-0181FCZZ	AH	N	C	LVDS interface FFC
17	XBBSD40P06000	AA		C	Screw (4×6)
18	CPWBN1451DS51	BF	N	E	Scanner interface PWB
19	DHAi-3152FCZZ	AF	N	C	Stanp interface harness
20	LPLTM5720FCZZ	AK	N	C	OC fixing plate
22	LPLTM5927FCZZ	AF	N	C	Dry heater fixing plate
24	LPLTM5877FCZZ	AE	N	C	Base rainforce plate
25	XHBSD30P06000	AA		C	Screw (3×6)
26	PCŌVP1598FCZZ	AL	N	D	Harness cover A
27	PSHEZ4842FCZZ	AD	N	C	Harness fixing sheet 2
28	DHAi-3303FCZZ	BC	N	C	MFP interface cable
29	PGUMS0283FCZ1	AA	N	C	Table glass cushion
30	LDAiU0610FCZZ	AE		D	Harness fixing base
31	LRALM0183FCZZ	AG	N	C	MB-B rail F
32	PSHEZ4843FCZZ	AC	N	C	Harness fixing sheet 3
34	LHLDW1007LCZZ	AD		C	Mini clamp (MN-1)
35	LHLDW0595FCZZ	AC		C	Edge holder (EDS2)
36	LHLDW1264FCZZ	AD		C	Wire holder (LWS-8S-2.5W)
37	LBNDJ0043FCZZ	AA		C	Snap band (SG-130)
38	DHAi-3153FCZZ	AC	N	C	PNC harness
39	LFiX-0537FCZZ	AD		C	Harness fixing plate
40	PSHEZ4841FCZ1	AD	N	C	Harness fixing sheet 1
41	LRALM0184FCZZ	AG	N	C	MB-B rail R
42	LX-BZ0004QSZZ	AB		C	Screw
43	PSHEZ4836FCZZ	AB	N	C	Screw protect sheet
44	LPLTP5960FCZZ	AE	N	C	SCN cable fixing plate
45	LHLDW1201CCZZ	AA		C	SK holder
46	LFiX-0569FCZZ	AD	N	C	SCN fixing cable
47	PMLT-1282FCZZ	AE	N	C	FFC fixing cushion

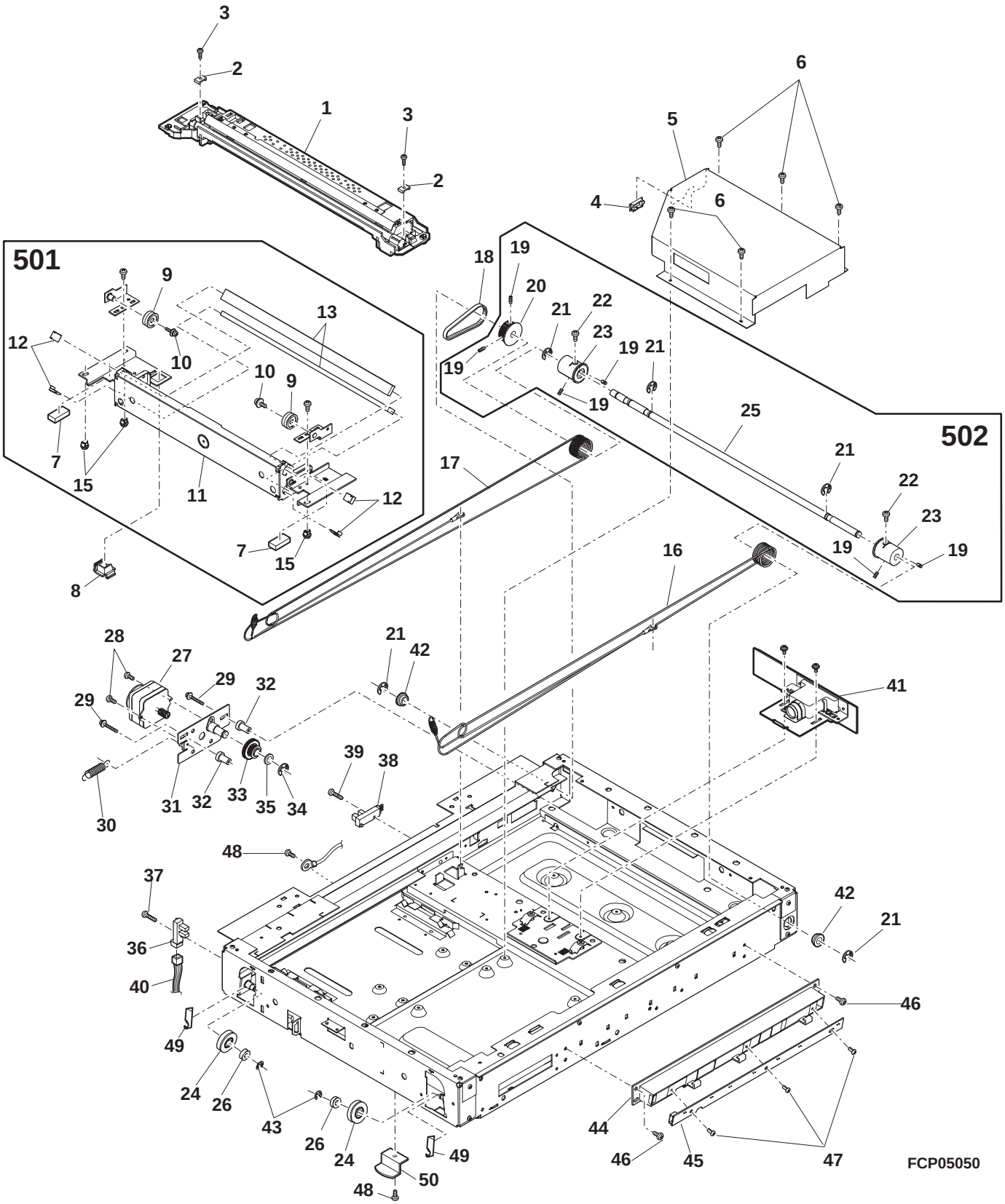
30 Optical unit 1[AR-EF1]



31 Optical unit 2[AR-EF1]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
⚠ 1	CDAiU0619DS51	BF	N	E	Lamp unit
2	LHLDZ1505FCZZ	AC	N	C	Wire holder
3	XBBSD40P06000	AA		C	Screw (4×6)
4	LBSHC0161FCZZ	AB		C	Bushing
5	CCŌVP1541FC02	AT	N	D	Dark box Assy
6	XHBSD30P04000	AA		C	Screw (3×4)
7	PCUSU0203FCZZ	AE		C	Protection cushion
8	PGiDM1890FCZZ	AC	N	C	CL guide
9	NPLYZ0399FCZZ	AG	N	C	W pulley T
10	XBPSD40P06KS0	AA		C	Screw (4×6KS)
12	LFiX−0284FCZZ	AC		C	2nd,3rd mirror fixing plate F
13	PMiR−0165FCZZ	AP	N	B	2nd,3rd mirror
15	MSLi−0138FCZZ	AC		C	Slider
16	PWiR−0192FCZZ	AQ	N	B	MB wire F
17	PWiR−0191FCZZ	AQ	N	B	MB wire R
18	NBLTH0329FCZZ	AG	N	B	Winding drive belt
19	LX−BZ0049FCZZ	AB		C	Screw
20	NPLYZ0338FCZZ	AN		C	Pulley (36T)
21	XRESP70−08000	AA		C	E type ring
22	LX−BZ0324FCZZ	AA		C	Screw
23	NPLYZ0013QSZZ	AL		C	Winding pully PAN
24	NPLYZ0005QSZZ	AG		C	Pulley
25	NSFTZ2586FCZZ	AS	N	C	Winding drive shaft
26	NPLYZ0006QSZZ	AD		C	L pulley
27	RMŌTS0857FCZZ	AZ	N	B	Scanner motor
28	XBPSD30P05K00	AA		C	Screw (3×5K)
29	XBPSD40P16KS0	AA		C	Screw (4×16KS)
30	MSPRT2846FCZZ	AC	N	C	Belt tenshion spring
31	CPLTM5719FC01	AG	N	C	Mirror motor fixing plate
32	PGUMS0002QSZZ	AL		C	Protection rubber
33	NGERH0027QSZZ	AH		C	Mirror motor idle gear
34	XRESP70−08000	AA		C	E type ring
35	LX−WZ0119FCZZ	AA		C	Washer
36	VHPGP3A38／／−1	AH		B	Photo transistor (GP3A38)
37	XBBSD40P14000	AA		C	Screw (4×14)
38	VHPGP1A22LC−1	AK		B	Photo interupter (GP1A22LC)
39	XBBSD40P10000	AA		C	Screw (4×10)
40	DHAi−3150FCZZ	AD	N	C	MHPS interface harness
41	CPLTM0031RS51	BS	N	E	CCD unit
42	NBRGC0133FCZ1	AC		C	PF bearing (M8)
43	XRESP40−05000	AA		C	E type ring
44	LHLDZ1381FCZZ	AL		C	ORS PWB holder
45	CPWBF1454FCE1	BN	N	E	ORS PD PWB
46	XHBSD40P06000	AA		C	Screw (4×6)
47	XEPSD40P06000	AA		C	Screw (4×6)
48	XHBSD30P06000	AA		C	Screw (3×6)
49	MSPRD3020FCZ1	AG	N	C	Wire stopper spring
50	PGiDM1964FCZZ	AC	N	C	Rack adjusting guide
501	CHLDZ1446FC31	BC	N	E	2,3 Mirror unit
502	CSFTZ2586FC31	AZ	N	E	Winder drive shaft unit

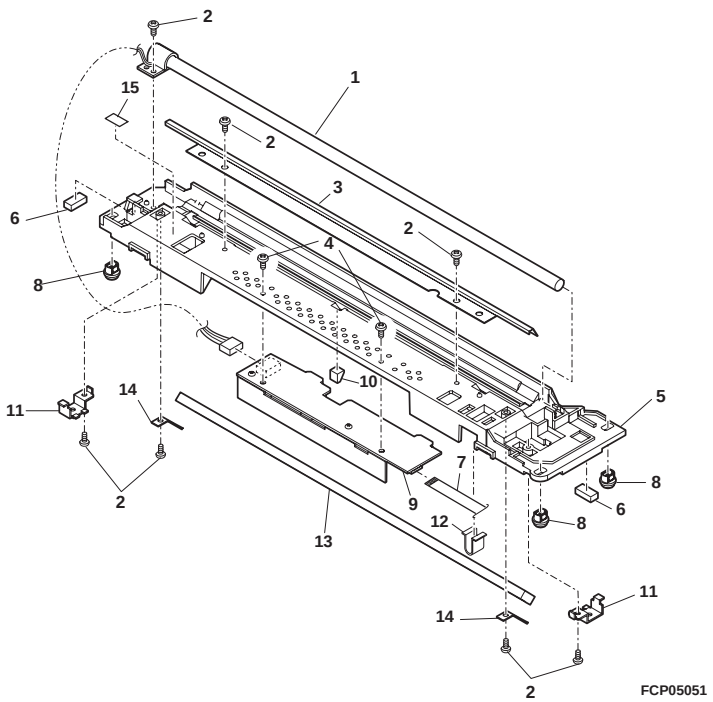
31 Optical unit 2[AR-EF1]



32 Lamp unit[AR-EF1]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
⚠ 1	RLMPD0658FCZZ	BA	N	B	Lamp
2	XEBSD30P08000	AA		C	Screw (3×8)
3	PREFL0172FCZZ	AK		B	Reflector
4	XBBSD30P12000	AA		C	Screw (3×12)
5	LDAiU0619FCZZ	AT	N	C	Lamp base
6	PCUSU0203FCZZ	AE		C	Protection cushion
7	QCNW−0168FCZZ	AE	N	C	CL interface FFC
8	MSLi−0138FCZZ	AC		C	Slider
9	CPWBF1449FC31	BH	N	E	Inverter PWB
10	PCUSF0334FCZZ	AP		C	Mirror cushion
11	LSTYM0261FCZZ	AB	N	C	Wire support plate
12	LFiX−0545FCZZ	AC	N	C	CL read harness fixing
13	PMiR−0164FCZZ	AP	N	B	1st mirror
14	MSPRP2825FCZZ	AC	N	C	Mirror spring
15	TLABZ4335FCZZ	AB		D	HV caution label
	(Unit)				
⚠ 901	CDAiU0619DS51	BF	N	E	Lamp unit

32 Lamp unit[AR-EF1]



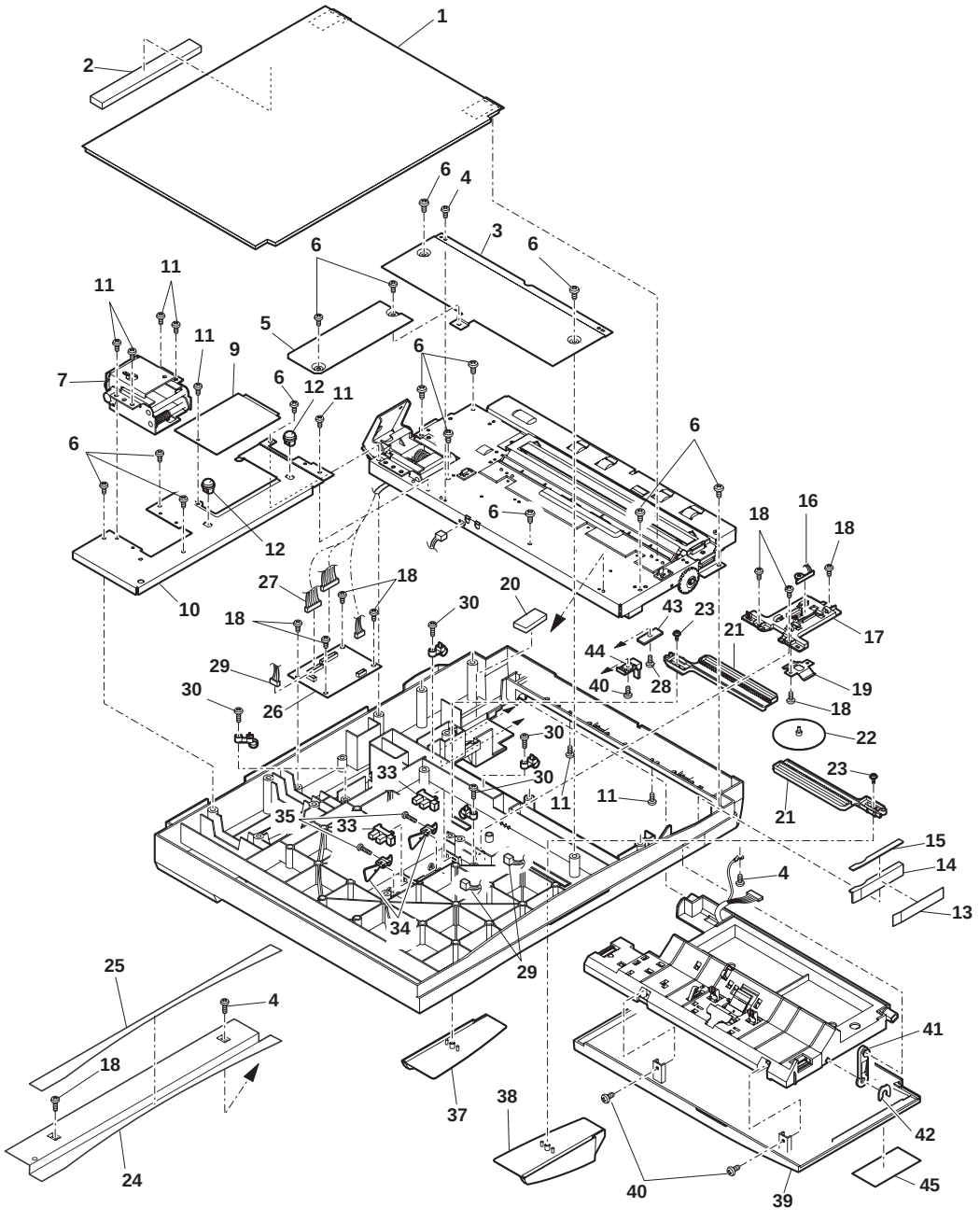
33 DSPF Assembly section[AR-EF1]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	PSHEZ4845FCZZ	AV	N	C	OC mat
2	PMLT−1286FCZZ	AD	N	C	OC cushion
3	PCŌVP1595FCZZ	AG	N	D	Rack cover
4	XHBSE30P06000	AA		C	Screw (3×6)
5	PCŌVP1615FCZZ	AE	N	D	Length detect cover N
6	XEBSE40P10000	AA		C	Screw (4×10)
7	MHNG−0208FCZZ	BA	N	C	SPF hinge R
9	PCŌVP1518FCZZ	AE		D	ICU ROM cover
10	LPLTM5887FCZZ	AL	N	C	Hinge joint plate
11	XHBSE40P08000	AA		C	Screw (4×8)
12	LFiX−0568FCZZ	AC	N	C	Original detect fixing
13	PTPE−0265FCZZ	AC	N	C	Cover tape
14	PCŌVP1644FCZZ	AD	N	C	F cover L
15	PGUMS0298FCZZ	AC	N	C	Cover rubber L
16	CPWBF1501DS51	BN	N	E	SPF VR PWB
17	LPLTP5743FCZZ	AF		C	Width detect fixing plate
18	XEBSD30P08000	AA		C	Screw (3×8)
19	MSPRP2830FCZZ	AA		C	Width detect spring
20	PGUMS0296FCZZ	AD	N	C	Cushion
21	NGERR1386FCZZ	AE		C	Width detect rack
22	NGERP1385FCZZ	AF		C	Width detect pinion
23	XEPSD30P06X00	AA		C	Screw (3×6X)
24	PCŌVP1645FCZZ	AH	N	C	F cover R
25	PGUMS0299FCZZ	AH	N	C	Cover rubber R
26	CPWBF1459DS51	BN	N	E	SPF PWB

33 DSPF Assembly section[AR-EF1]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
27	DHAi−3166FCZZ	AY	N	C	DSPF body interface harness
28	XESSE30P08000	AA		C	Screw (3×8)
29	DHAi−3161FCZZ	AK	N	C	SPF size detect harness
30	XEBSE30P10000	AA		C	Screw (3×10)
33	VHPGP1A73A+−1	AG		B	Photo sensor (GP1A73A)
34	MLEVP0794FCZZ	AC	N	C	Length detect actuator
35	XEBSD40P16000	AA		C	Screw (4×16)
37	LPLTP5778FCZZ	AG	N	D	Adjust plate R
38	LPLTP5777FCZZ	AG	N	D	Adjust plate F
39	PCÖVP1549FCZZ	AU	N	D	Upper cover
40	XEBSE30P08000	AA		C	Screw (3×8)
41	MARMP0243FCZZ	AD		C	Manual feeding tray arm
42	PRNGP0090FCZZ	AA		C	Ring (E5)
43	LPLTM2573FCZ1	AD		C	ADF MG plate
44	LPLTP5938FCZZ	AC	N	C	Shading plate N
45	TLABH4440FCZZ	AF		D	Original read label (Japan)

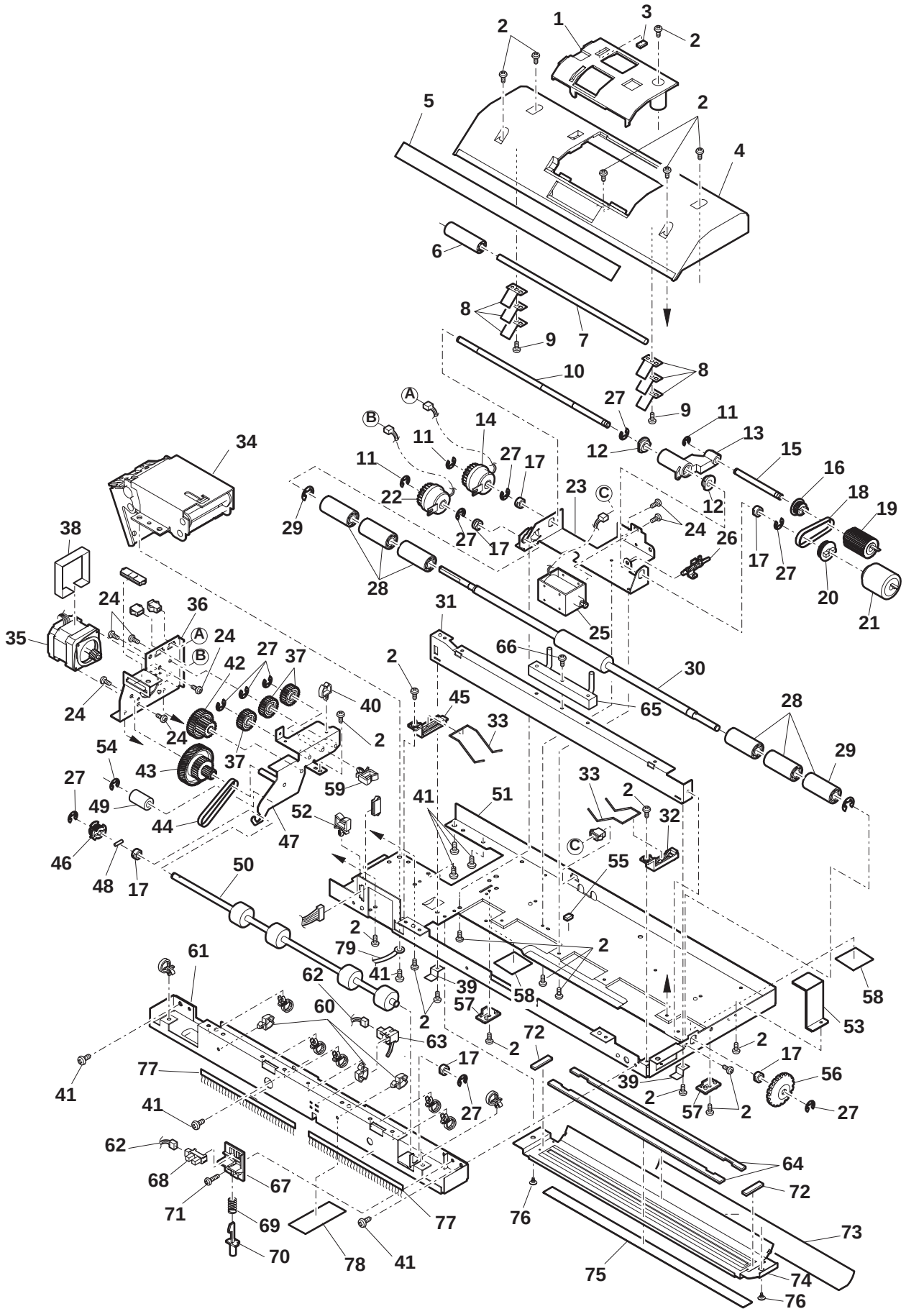
33 DSPF Assembly section[AR-EF1]



34 DSPF Paper feed unit[AR-EF1]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	PCŌVP1594FCZZ	AG	N	D	Roller cover
2	XHBSE30P06000	AA		C	Screw (3×6)
3	PMLT-1272FCZZ	AB	N	C	Damper cushion 3
4	PGiDM1953FCZZ	AS	N	C	Paper feed PG SPF
5	PSHEP4915FCZZ	AE	N	C	PS rear mylar
6	PCLR-0471FCZZ	AG	N	C	PS support roller
7	NSFTZ2600FCZZ	AM	N	C	PS support shaft
8	MSPRP2878FCZZ	AC	N	C	PS support plate spring
9	XEBSD30P08000	AA		C	Screw (3×8)
10	NSFTZ2599FCZ1	AW	N	C	Separate roller shaft SPF
11	XRESP40-06000	AA		C	E type ring
12	NBRGC0136FCZZ	AC		C	Bearing (M6)
13	LHLDZ1483FCZZ	AF		C	Paper feed rotation plate
14	PCLC-0303FCZZ	AT	N	B	Separate clutch
15	NSFTZ2678FCZZ	AL	N	C	Pick up shaft
16	NPLYZ0398FCZZ	AC		C	Pick up roller pulley (22P)
17	NBRGM0096FCZ1	AB		C	Bearing
18	NBLTH0363FCZZ	AG	N	B	Belt (S2M120)
19	NRŌLR1312FCZZ	AN		C	Pick up roller
20	NPLYZ0397FCZZ	AK		C	Paper feed roller pulley (28P)
21	NRŌLR1317FCZZ	AP		C	Separate roller
22	PCLC-0302FCZZ	AT	N	B	PS clutch SPF
23	LPLTM5928FCZZ	AG	N	C	Paper feed base plate SPF
24	XBBSD30P06000	AA		C	Screw (3×6)
25	RPLU-0336FCZZ	AS	N	B	Pick up solenoid
26	MARMP0284FCZZ	AC	N	C	Pick up joint arm N
27	XRESP50-06000	AA		C	E type ring
28	NRŌLP1364FCZZ	AC		C	Delivery roller M
29	XRESP70-08000	AA		C	E type ring
30	NRŌLR1318FCZZ	AR	N	C	PS roller SPF
31	LSTYM0288FCZZ	AK	N	C	CIS stay
32	LHLDZ1485FCZZ	AC	N	C	SP holder F
33	MSPRD3002FCZZ	AC	N	C	Spring N
34	MHNG-0209FCZZ	BC	N	C	DSPF hinge L
35	RMŌTS0876FCZZ	BD	N	B	SPF motor N
36	LFRM-1022FCZZ	AK	N	D	Drive frame
37	NGERH1477FCZZ	AC	N	C	Gear (24T)
38	PSHEZ4949FCZZ	AE	N	C	Motor sheet
39	MSPRP3011FCZZ	AC	N	C	Earth plate spring
40	LHLDW1009ACZZ	AA		C	Clamp
41	XHBSE40P08000	AA		C	Screw (4×8)
42	NGERH1476FCZZ	AD	N	C	Gear (35T/18T)
43	NGERH1478FCZZ	AE	N	C	Gear (55T/28T/18P)
44	NBLTH0364FCZZ	AG	N	B	Belt (S2M130)
45	LHLDZ1486FCZZ	AC	N	C	SP holder R
46	NPLYZ0375FCZZ	AC		C	Pulley (22T)
47	CPLTM5882FC02	AN	N	C	Drive plate
48	LPiNS1031HCZZ	AA		C	Spring pin
49	PCLR-0426FCZZ	AD		C	Slide roller
50	NRŌLR1320FCZZ	AQ	N	C	Delivery roller SPF
51	LPLTM5884FCZZ	AW	N	C	Base tray reinforce plate N
52	LHLDW0429FCZZ	AB		C	Wire holder (WS-2NS)
53	LPLTM5785FCZZ	AC	N	C	MG plate
54	XRESP20-04000	AA		C	E type ring
55	PMLT-1270FCZZ	AB	N	C	Damper cushion 1
56	JKNBZ0141FCZZ	AH	N	C	Jam release knob
57	LPLTM5889FCZZ	AC	N	C	Datum plate
58	PSHEP4846FCZZ	AD	N	C	OC mat mylar R
59	LHLDW2101SCZZ	AB		C	Cable clamp
60	LHLDW1009ACZZ	AA		C	Clamp
61	LPLTM5929FCZZ	AR	N	C	Delivery roller fixing plate
62	DHAi-3281FCZZ	AH	N	C	SPF delivery sensor harness
63	QSW-Z0531FCZZ	AL		B	Delivery jam sensor
64	PCUSS0372FCZZ	AD	N	C	CIS cushion 1
65	LSTPP0359FCZZ	AE	N	C	PS fornt stopper
66	XHBSD30P14000	AA		C	Screw (3×14)
67	LHLDZ1484FCZZ	AC	N	C	Open/close holder
68	VHPGP1A73A+-1	AG		B	Photo sensor (GP1A73A)
69	MSPRC3001FCZZ	AB	N	C	Open/close detect spring N
70	MLEVP0837FCZZ	AC	N	C	Open/close actuator N
71	XHBSE30P10000	AA		C	Screw (3×10)
72	PCUSS0373FCZZ	AB	N	C	CIS cushion 2
73	PSHEP4916FCZ1	AF	N	C	White mylar
74	PGiDH1897FCZZ	AT	N	C	CIS paper guide
75	PGLSP0103FCZZ	AV	N	C	CIS glass
76	LX-BZ0931FCZZ	AC	N	C	Screw (M3)
77	PBRSS0209FCZZ	AG	N	B	Discharger blass SPF
78	PSHEZ4957FCZZ	AC	N	C	Delivery sheet
79	DHAi-3336FCZZ	AB	N	C	ESD harness DSPF

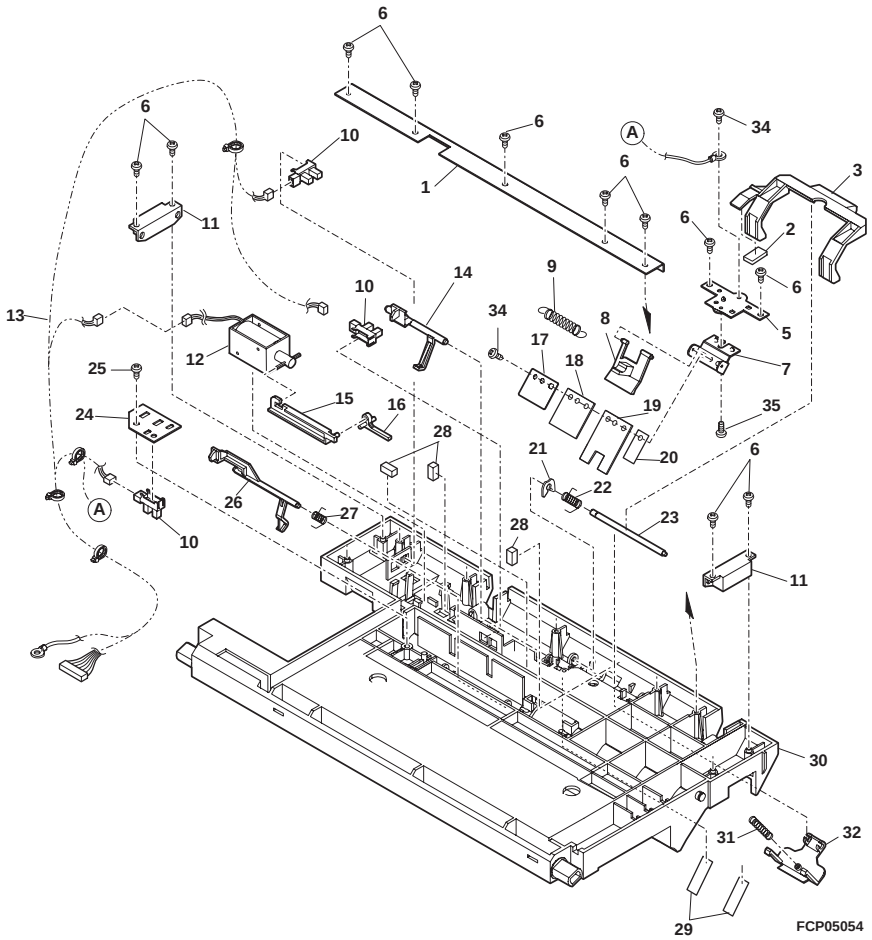
34 DSPF Paper feed unit[AR-EF1]



35 DSPF Upper transfer unit[AR-EF1]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	LPLTM5891FCZZ	AE	N	C	Upper delivery rainforce plate
2	PMLT-1272FCZZ	AB	N	C	Damper cushion 3
3	LSTPP0353FCZZ	AE	N	C	Original stopper
5	LPLTM5930FCZZ	AD	N	C	Separate pad rainforce plate
6	XEBSD30P08000	AA		C	Screw (3×8)
7	CPLTM5746FC01	AE	N	C	Separate pad fixing plate AS
8	LPLTP5747FCZZ	AC	N	C	Separate plate
9	MSPRT2864FCZZ	AC	N	C	Pressure spring
10	VHPGP1A73A+-1	AG		B	Photo sensor (GP1A73A)
11	PMAGT0072FCZZ	AF		C	Magnet catch
12	RPLU-0347FCZZ	AQ	N	B	Gate solenoid
13	DHAi-3162FCZZ	AK	N	C	SPF paper feed harness
14	MLEVP0796FCZZ	AC	N	C	Set detect actuator
15	MARMP0248FCZZ	AE		C	MF gate joint arm
16	MLEVP0804FCZZ	AC	N	C	Stopper lever
17	MSPRP2832FCZZ	AC	N	C	Separate assistance plate spring
18	PSHEZ4878FCZZ	AC	N	C	Separate mylar upper
19	PSHEZ4847FCZZ	AL	N	C	Separate sheet
20	PSHEP4848FCZZ	AB	N	C	Separate mylar lower
21	LSTPP0314FCZZ	AA		C	E3 stopper
22	MSPRD2870FCZ1	AC	N	C	Stopper spring
23	NSFTZ2659FCZZ	AR	N	C	Fulcrum shaft
24	LPLTM5932FCZZ	AC		C	Tray 2 sensor fixing plate
25	XEBSE40P10000	AA		C	Screw (4×10)
26	MLEVP0797FCZZ	AC	N	C	PS front actuator
27	MSPRD2879FCZZ	AB	N	C	PS front actuator spring
28	PMLT-1271FCZZ	AB	N	C	Damper cushion 2
29	PSHEP4937FCZZ	AB	N	C	Fixing mylar
30	PGiDM1899FCZZ	AY	N	C	Upper delivery PG
31	MSPRT2863FCZZ	AB	N	C	Paper feed plate spring
32	LPLTP5748FCZZ	AD	N	C	Paper feed plate
34	XHBSE30P06000	AA		C	Screw (3×6)
35	XBBS230P10000	AA		C	Screw (3×10)

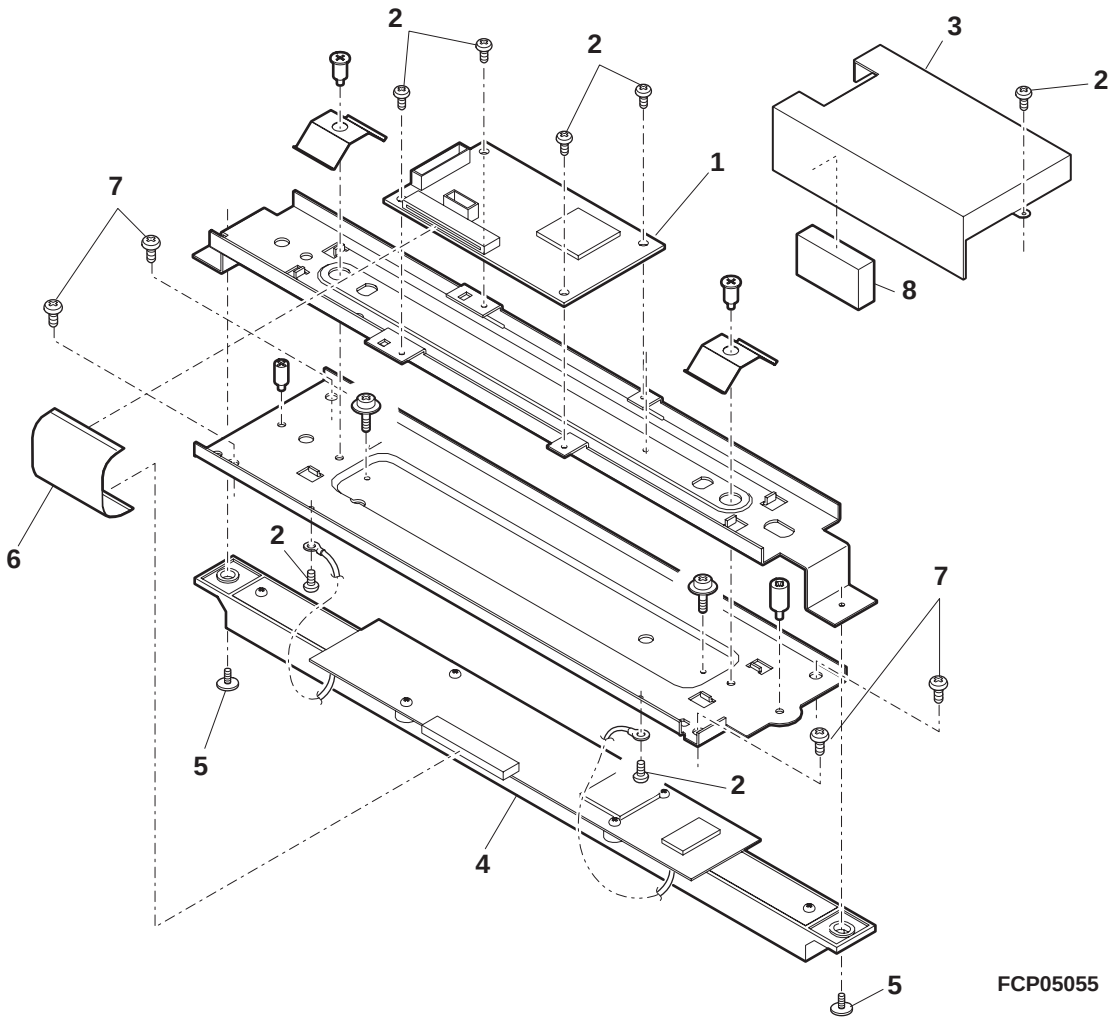
35 DSPF Upper transfor unit[AR-EF1]



36 DSPF CIS unit[AR-EF1]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	CPWBN1458FCE1	BF	N	E	CIS control PWB
2	XBBSD30P06000	AA		C	Screw (3×6)
3	PCOVP1593FCZZ	AF	N	D	CIS PWB cover N
4	DUNT-7079FCZZ	CC	N	E	CIS unit
5	LX-BZ0680FCZZ	AB		C	Screw
6	QCNW-0170FCZZ	AH	N	C	CIS interface FFC
7	XBBSD40P08000	AA		C	Screw (4×8)
8	PMLT-1284FCZZ	AE	N	C	Interface FFC fixing cushion

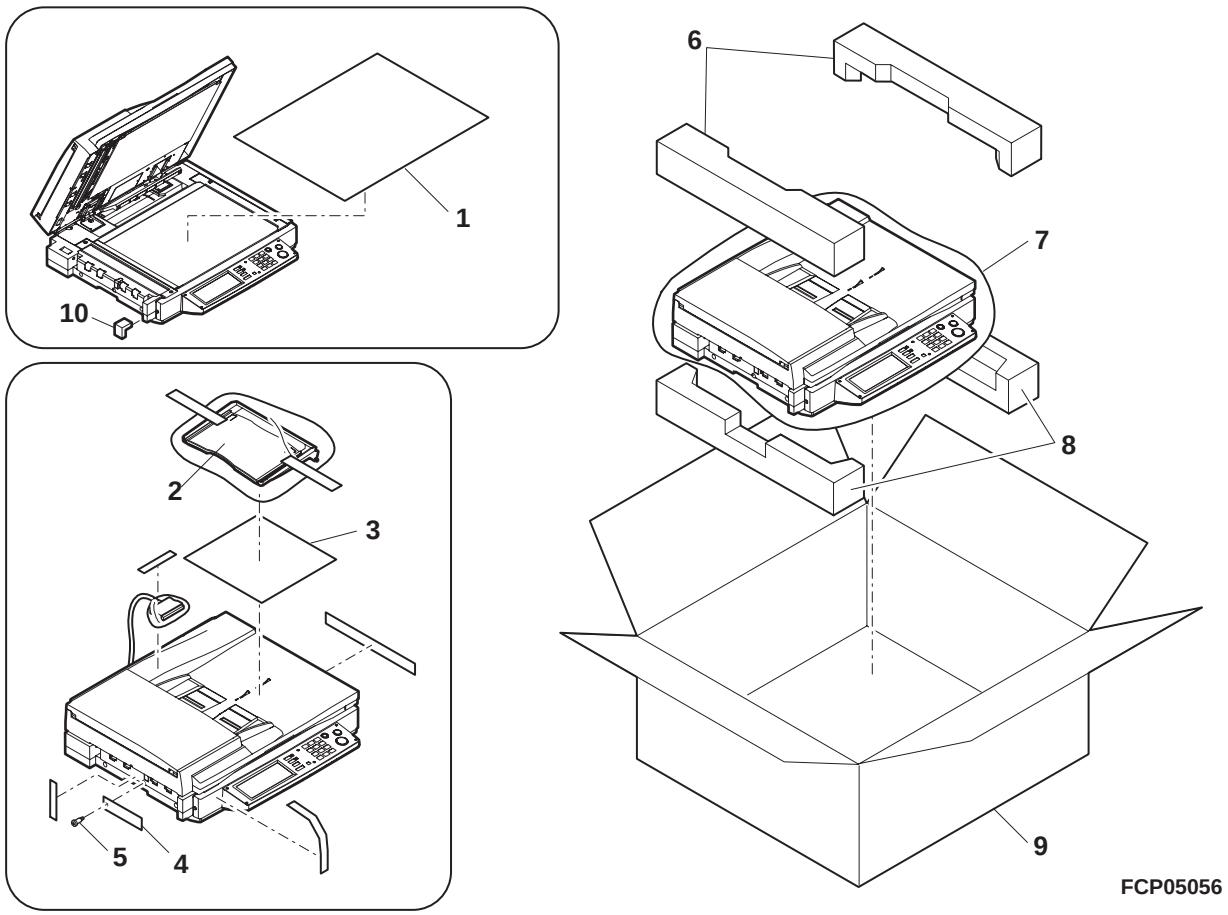
36 DSPF CIS unit[AR-EF1]



37 Packing Material & Accessories[AR-EF1]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	SPAKA6075DSZZ	AA	N	D	RSPF protect sheet 1
2	LSŌU−0177FCGZ	AP		D	Delivery tray T
	LSŌU−0179FCZZ	AR		D	Delivery tray 1
3	SPAKA0307QSZZ	AD		D	Protect sheet FN5
4	TCADZ1178FCZZ	AB		D	Screw caution card
5	LX−BZ0787FCZZ	AH		C	Screw for 2/3 mirror lock
6	SPAKA6132FCZZ	AT	N	D	Packing add upper EF1
7	SSAKZ0003QSZZ	AF		D	Body vinyl bag
8	SPAKA6133FCZZ	AU	N	D	Packing add botom EF1
9	SPAKC6131DSZZ	AF	N	D	Packing case (Japan)
	SPAKC6131DS11	AF	N	D	Packing case (Except Japan)
10	SPAKA6265FCZZ	AC	N	D	Fusing protect add

37 Packing Material & Accessories[AR-EF1]



38 MFP OPE PWB[AR-EF1]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
1	QCNCM1171FCZZ	AE	N	C	Connector (6pin)	[CN2]
2	QCNCW1134FCZZ	AH		C	Connector (24pin)	[CN1]
3	QSW-P0005QSZZ	AC		B	Tact switch (B3F-6102)	[PRK,FAK,COK,JOK,CUK,1K,2K]
	QSW-P0005QSZZ	AC		B	Tact switch (B3F-6102)	[3K,4K,5K,6K,7K,8K,9K]
	QSW-P0005QSZZ	AC		B	Tact switch (B3F-6102)	[*K,K,#K,CLK,CAK,PSW]
4	RALMB1002LCZZ	AE		B	Alarm (PKM13EPY-4000-TF01)	[BZ1]
5	RC-KZ0008QCZZ	AB	N	C	Capacitor (UP050F ZABZ)	[C6]
6	RCRS-0007FCZZ	AD		B	Crystal (CSB480EB)	[X1]
7	RH-DZ0016FCZZ	AB		B	Diode (MA700)	[D1]
8	VCEAJU1CW476M	AB		C	Capacitor (16WV 47µF)	[C1]
9	VCKYPU1EB223Z	AB		C	Capacitor (25WV 0.022µF)	[C2,3]
10	VCKYPU1HB101K	AA		C	Capacitor (50WV 100PF)	[C4,5]
11	VHD1SS133/-1	AA		B	Diode (1SS133)	[D2,3]
12	VHiS1340AF+-1	AH		B	IC (S1340AF)	[IC1]
13	VHP1LHLE-002A	AC		B	LED(Green) (LTL-1LHLE-002A)	[PRT,FAX,COPY,JOB,PONL]
	VHP1LHLE-002A	AC		B	LED(Green) (LTL-1LHLE-002A)	[PDATA,FCM,FDATA]
14	VHPLT9400E/-1	AK		B	LED (LT9400E)	[RPL]
15	VRD-HT2EY101J	AA		C	Resistor (1/4W 100Ω ±5%)	[R1]
16	VRD-HT2EY102J	AA		C	Resistor (1/4W 1.0KΩ ±5%)	[R8]
17	VRD-HT2EY302J	AA		C	Resistor (1/4W 3.0KΩ ±5%)	[R2]
18	VRD-HT2EY331J	AA		C	Resistor (1/4W 330Ω ±5%)	[R3]
19	VRD-HT2EY471J	AA		C	Resistor (1/4W 470Ω ±5%)	[R4,5,6,7]
20	VS2SC1740SR-1	AB		B	Transistor (2SC1740SR)	[Q2]
21	VSDTC114YS/-1	AB		B	Transistor (DTC114YS)	[Q1]
	(Unit)					
901	CPWBF1469FCE1	BN	N	E	MFP OPE PWB	

39 Scanner control PWB[AR-EF1]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
1	QCNCM0828FCZZ	AE		C	Connector (26pin)	[CN13]
2	QCNCM0829FCZZ	AG		C	Connector (28pin)	[CN12]
3	QCNCM1166FCZZ	AK	N	C	Connector (20pin)	[CN18]
4	QCNCM1167FCZZ	AP	N	C	Connector (50pin)	[CN19]
5	QCNCM7014SC1C	AC		C	Connector (13pin)	[CN5]
6	QCNCM7022SC0C	AB		C	Connector (3pin)	[CN10]
7	QCNCM7022SC0E	AB		C	Connector (5pin)	[CN6]
8	QCNCM7022SC0F	AB		C	Connector (6pin)	[CN7]
9	QCNCW0885FCZZ	AG		C	Connector (12pin)	[CN14]
10	QCNCW7040XC8J	AP		C	Connector (80pin)	[CN16]
11	QSŌCZ0002QSZZ	AD		C	IC socket (8pin)	[IC13]
12	QSŌCZ0071FCZZ	AP		C	Socket (72pin)	[SOCKET1]
13	QSŌCZ6428ACZZ	AE		C	IC socket (28pin)	[IC14]
14	RCRMZ6007RCZZ	AD		B	Resonator (4.19MHz)	[X1]
15	RCRSZ0001QSZZ	AG		B	Crystal (19.6608MHz)	[X2]
16	RFiLN0049FCZZ	AE	N	C	Filter	[NF5,NF6,NF7,NF8,NF9,NF10]
17	RFiLN6012RCZZ	AB		C	EMI filter	[NF1,NF4]
18	RFiLZ1005LCZZ	AB		C	EMI filter	[NF3]
19	RH-iX2196SCZZ	AG		B	Regulator	[IC5]
20	RMPTR4103ACZZ	AB		B	Block resistor (10KΩ×4)	[BR9,BR3,BR4,BR7,BR8,BR10]
	RMPTR4103ACZZ	AB		B	Block resistor (10KΩ×4)	[BR12,BR11,BR6,BR13,BR14,BR15]
	RMPTR4103ACZZ	AB		B	Block resistor (10KΩ×4)	[BR16,BR17,BR18,BR20,BR21,BR22]
	RMPTR4103ACZZ	AB		B	Block resistor (10KΩ×4)	[BR23,BR24,BR25,BR26,BR27,BR28]
	RMPTR4103ACZZ	AB		B	Block resistor (10KΩ×4)	[BR29,BR30,BR5,BR19,BR1]
21	VCCCCZ1HH220J	AA		C	Capacitor (50WV 22pF)	[C58,C60]
22	VCEAGA1AW476M	AA		C	Capacitor (10WV 47µF)	[C46,C36]
23	VCEAGA1AW477M	AB		C	Capacitor (10WV 470µF)	[C20,C24]
24	VCEAGA1CW477M	AB		C	Capacitor (16WV 470µF)	[C10]
25	VCEAGA1HW224M	AA		C	Capacitor (50WV 0.22µF)	[C73,C74]
26	VCEAGA1VW476M	AB		C	Capacitor (35WV 47uF)	[C63]
27	VCEAZU1VW477M	AD		C	Capacitor (35WV 470µF)	[C16]
28	VCKYCZ1CB103K	AA		C	Capacitor (16WV 0.010µF)	[C76,C77,C78,C80]
29	VCKYCZ1EF223Z	AA		C	Capacitor (25WV 0.022µF)	[C1,C11,C13,C14,C22,C23]
	VCKYCZ1EF223Z	AA		C	Capacitor (25WV 0.022µF)	[C26,C19,C12,C37,C40,C41]
	VCKYCZ1EF223Z	AA		C	Capacitor (25WV 0.022µF)	[C42,C47,C48,C49,C51,C57]
	VCKYCZ1EF223Z	AA		C	Capacitor (25WV 0.022µF)	[C59,C61,C65,C66,C67,C68]
	VCKYCZ1EF223Z	AA		C	Capacitor (25WV 0.022µF)	[C69,C71,C72,C21,C35,C50,C82]
30	VCKYCZ1HB102K	AA		C	Capacitor (50WV 1000pF)	[C2,C3,C4,C5,C6,C7]
	VCKYCZ1HB102K	AA		C	Capacitor (50WV 1000pF)	[C8,C9,C25,C27,C28,C29]
	VCKYCZ1HB102K	AA		C	Capacitor (50WV 1000pF)	[C30,C31,C32,C33,C34,C39]
	VCKYCZ1HB102K	AA		C	Capacitor (50WV 1000pF)	[C43,C44,C53,C64,C75,C79,C84]
31	VCKYCZ1HB222K	AA		C	Capacitor (50WV 2200pF)	[C45,C54,C55,C62]
32	VCKYCZ1HF103Z	AA		C	Capacitor (50WV 0.01µF)	[C15,C18,C70,C81,C83]
33	VCQYNA1HM103K	AA		C	Capacitor (50WV 0.01µF)	[C56]
34	VHDDAN202K/-1	AB		B	Diode (DAN202K)	[D1,D3,D4,D18,D19,D20]
	VHDDAN202K/-1	AB		B	Diode (DAN202K)	[D22,D23,D15,D14]

39 Scanner control PWB[AR-EF1]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
35	VHDDAP202K／－1	AB		B	Diode (DAP202K)	[D5,D16,D17,D24,D25,D26]
	VHDDAP202K／－1	AB		B	Diode (DAP202K)	[D13,D12]
36	VHDDSM1D1／／－1	AB		B	Diode (DSM1D1)	[D21,D6]
37	VHDM1FL20U＋－1	AC	N	B	Diode (M1FL20U)	[D8,D9,D10,D11]
38	VHDMA704A／／－1	AC		B	Diode (MA704A)	[D2]
39	VHEHZS3B3／／－1	AB		B	Zener diode (HZS3B3)	[D7]
40	VHi74VHC04M－1	AE	N	B	IC (74VHC04M)	[IC8,IC18]
41	VHi74VHC32M－1	AD	N	B	IC (74VHC32M)	[IC6]
42	VHi90LV17AW－1	AP		B	IC (90LV17AW)	[IC21]
43	VHiD65943GJ－1	AY	N	B	IC (D65943GJ)	[IC7]
44	VHiEES04L400P	AG		B	IC (EES04L400P)	[IC13]
45	VHiH8S2322R－1	AZ		B	IC (H8S2322R)	[IC11]
46	VHiHN58V65A－1	AW		B	IC (HN58V65A)	[IC14]
47	VHiLM324D＋＋－1	AE		B	IC (LM324D)	[IC1]
48	VHiLM339D＋＋－1	AE		B	IC (LM339D)	[IC10]
49	VHiLV25612J－1	AQ		B	IC (LV25612J)	[IC19]
50	VHiMTD1361F－1	AR		B	IC (MTD1361F)	[IC9]
51	VHiTD62003AP1	AG		B	IC (TD62003AP1)	[IC4,IC15,IC20]
52	VHiTD62503F／－	AG		B	IC (TD62503F)	[IC12,IC17]
53	VHiVHC244SJ－1	AG	N	B	IC (VHC244SJ)	[IC2,IC3]
54	VRD－HT2EY163J	AA		C	Resistor (1/4W 16KΩ ±5%)	[R8,R9]
55	VRD－HT2EY911J	AA		C	Resistor (1/4W 910Ω ±5%)	[R10]
56	VRS－CZ1JD000J	AA		C	Resistor (1/16W 0Ω ±5%)	[R37]
57	VRS－CZ1JD101J	AA		C	Resistor (1/16W 100Ω ±5%)	[R39]
58	VRS－CZ1JD102J	AA		C	Resistor (1/16W 1.0KΩ ±5%)	[R7,R21,R47,R56]
59	VRS－CZ1JD103F	AA		C	Resistor (1/16W 10KΩ ±1%)	[R46,R1]
60	VRS－CZ1JD103J	AA		C	Resistor (1/16W 10KΩ ±5%)	[R5,R31,R29,R3,R6,R22]
	VRS－CZ1JD103J	AA		C	Resistor (1/16W 10KΩ ±5%)	[R24,R25,R30,R41,R4,R55]
	VRS－CZ1JD103J	AA		C	Resistor (1/16W 10KΩ ±5%)	[R28,R69]
61	VRS－CZ1JD122J	AA		C	Resistor (1/16W 1.2KΩ ±5%)	[R16,R13,R19,R33,R52,R53]
62	VRS－CZ1JD151J	AA		C	Resistor (1/16W 150Ω ±5%)	[R27]
63	VRS－CZ1JD203J	AA		C	Resistor (1/16W 20KΩ ±5%)	[R48,R59,R62,R65]
64	VRS－CZ1JD222J	AA		C	Resistor (1/16W 2.2KΩ ±5%)	[R12,R14,R15,R17,R18,R32]
	VRS－CZ1JD222J	AA		C	Resistor (1/16W 2.2KΩ ±5%)	[R54,R11]
65	VRS－CZ1JD303F	AA		C	Resistor (1/16W 30KΩ ±1%)	[R2]
66	VRS－CZ1JD303J	AA	N	C	Resistor (1/16W 30KΩ ±5%)	[R51]
67	VRS－CZ1JD561J	AA		C	Resistor (1/16W 560Ω ±5%)	[R35]
68	VRS－CZ1JD562J	AA		C	Resistor (1/16W 5.6KΩ ±5%)	[R57,R58,R60,R61,R63,R64]
69	VRS－CZ1JD621J	AA		C	Resistor (1/16W 620Ω ±5%)	[R34]
70	VRS－CZ1JD624J	AA	N	C	Resistor (1/16W 620KΩ ±5%)	[R23]
71	VRS－CZ1JD681J	AA		C	Resistor (1/16W 680Ω ±5%)	[R68]
72	VRS－CZ1JD752J	AA		C	Resistor (1/16W 7.5KΩ ±5%)	[R26,R43,R44]
73	VRS－CZ1JD911J	AA	N	C	Resistor (1/16W 910Ω ±5%)	[R38,R36]
74	VRS－RE3DA1R0J	AB		C	Resistor (2W 1.0Ω ±5%)	[R20,R42]
75	VS2SB1197／／－1	AC		B	Transistor (2SB1197)	[Q8,Q9,Q10]
76	VS2SK3065＋＋－1	AG	N	B	Transistor (2SK3065)	[Q11]
77	VSDTA114YK／－1	AC		B	Transistor (DTA114YK)	[Q2,Q3,Q6]
78	VSDTC114YK／－1	AC		B	Transistor (DTC114YK)	[Q4,Q5,Q7]
79	VSUPA502T／／－1	AD		B	Transistor (UPA502T)	[Q1]
	(Unit)					
901	CPWBN1450FCE1	BF	N	E	Scanner control PWB	

40 CIS Control PWB[AR-EF1]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
1	QCNCM0880FCZZ	AF		C	Connector (26pin)	[CN100]
2	QCNCM0923FC12	AE		C	Connector (12pin)	[CN1]
3	QCNCW1160FCZZ	AD	N	C	Connector (FFC9604S35F)	[CN2]
4	RFiLN6012RCZZ	AB		C	EMI filter (E103)	[NF2,11]
5	RFiLZ1005LCZZ	AB		C	EMI filter (EXC-EMT103DT)	[NF100,4,10,12,13]
6	VCCCCZ1HH101J	AA		C	Capacitor (50WV 100pF)	[C4,5,8,9,10,11,22]
	VCCCCZ1HH101J	AA		C	Capacitor (50WV 100pF)	[C23,24,25,31,32,33,34]
	VCCCCZ1HH101J	AA		C	Capacitor (50WV 100pF)	[C40,48,49,51,52,53,60,61,62]
7	VCEAYU1EC476M	AC	N	C	Capacitor (25WV 47μF)	[C3,15,26,28,41,54]
8	VCEAYU1VC476M	AC	N	C	Capacitor (25WV 47μF)	[C18]
9	VCKYCZ1CF104Z	AB		C	Capacitor (35WV 0.10μF)	[C100,1,2,7,12,13,17,27]
	VCKYCZ1CF104Z	AB		C	Capacitor (35WV 0.10μF)	[C29,30,35,36,37,42,43]
	VCKYCZ1CF104Z	AB		C	Capacitor (35WV 0.10μF)	[C45,46,50,55,58,63,64]
	VCKYCZ1CF104Z	AB		C	Capacitor (35WV 0.10μF)	[C65,66]
10	VCKYCZ1HB102K	AA		C	Capacitor (50WV 1000pF)	[C16,20,21,57,59]
11	VCKYCZ1HF103Z	AA		C	Capacitor (0.01μF/50V)	[C6,14,19,38,39,44,56]
12	VHi74VHC04M－1	AE	N	B	IC (74VHC04M)	[IC4]
13	VHi74VHCT240X	AF		B	IC (74VHCT240X)	[IC100]
14	VHi7SZ125M5－1	AE	N	B	IC (7SZ125M5)	[IC2]
15	VHi90LV27AW－1	AQ	N	B	IC (90LV27AW)	[IC5]
16	VHiD82825GM－1	BK	N	B	IC (D82825GM)	[IC1]

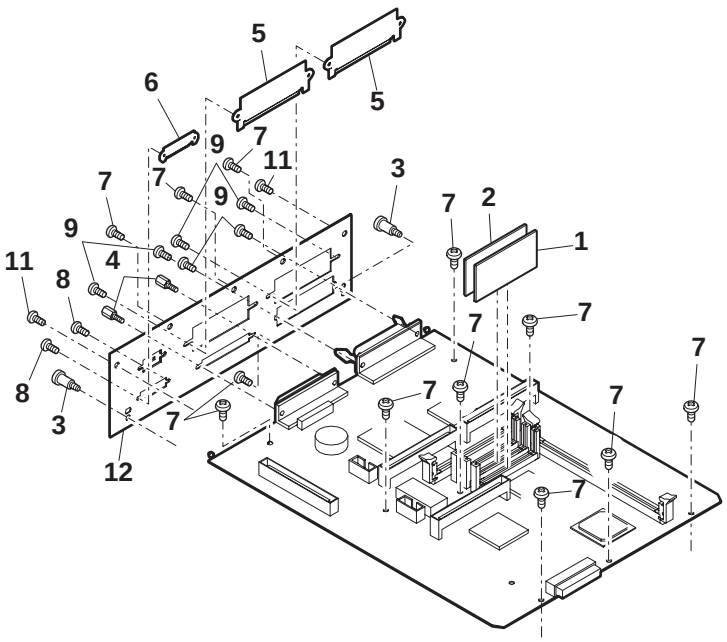
40 CIS Control PWB[AR-EF1]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
17	VHiFS781BZB-1	AP		B	IC (FS781BZB)	[IC6]
18	VHiM3064ATC-1	AX	N	B	IC (M3064ATC)	[IC7]
19	VHiVHC244SJ-1	AG	N	B	IC (VHC244SJ)	[IC3]
20	VRS-CZ1JD000J	AA		C	Resistor (1/16W 0Ω ±5%)	[R5,15,18,19,20,21,34]
	VRS-CZ1JD000J	AA		C	Resistor (1/16W 0Ω ±5%)	[R35,43,44,45,46,48,49]
	VRS-CZ1JD000J	AA		C	Resistor (1/16W 0Ω ±5%)	[R50,51,52,53,54,55,59]
21	VRS-CZ1JD101J	AA		C	Resistor (1/16W 100Ω ±5%)	[R1,2,3,4,9,10,14,22]
	VRS-CZ1JD101J	AA		C	Resistor (1/16W 100Ω ±5%)	[R23,24,25,37,38,39,40]
	VRS-CZ1JD101J	AA		C	Resistor (1/16W 100Ω ±5%)	[R41,47,56,57]
22	VRS-CZ1JD102J	AA		C	Resistor (1/16W 1.0KΩ ±5%)	[R100,17,26,27,28,29,30]
	VRS-CZ1JD102J	AA		C	Resistor (1/16W 1.0KΩ ±5%)	[R31,32,33,36,42]
23	VRS-CZ1JD222J	AA		C	Resistor (1/16W 2.2KΩ ±5%)	[R6,7,8,11,12,13]
24	VRS-CZ1JD332F	AA		C	Resistor (1/16W 3.3KΩ ±1%)	[R58]
	(Unit)					
901	CPWBN1458FCE1	BF	N	E	CIS control PWB	

41 MFP Controler PWB[AR-M11]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION	
1	VHi28F322L01F	BE	N	B	MFP flash ROM A J (28F322L01F)	[Japan]
	VHi28F322L03F	BF	N	B	MFP flash ROM A EX (28F322L03F)	[except Japan]
2	VHi28F322L02F	BF	N	B	MFP flash ROM B J (28F322L02F)	[Japan]
	VHi28F322L04F	BL	N	B	MFP flash ROM B EX (28F322L04F)	[except Japan]
3	LX-BZ0828FCZZ	AD		C	Handle fixing screw	
4	LX-BZ0921FCZ1	AE	N	C	Scanner Screw	
5	PCOVP1557FCZZ	AC		C	LAN/option cover	
6	PCOVP1560FCZZ	AC	N	C	FAX I/F cover	
7	XBBSD30P06000	AA		C	Screw (3×6)	
8	XBPSD26P06000	AA		C	Screw (2.6×6)	
9	XBPSD30P06000	AA		C	Screw (3×6)	
11	XHBSE30P06000	AA		C	Screw (3×6)	
12	LPLTM5765FCZ1	AH	N	C	Control joint plate	

41 MFP Controler PWB[AR-M11]



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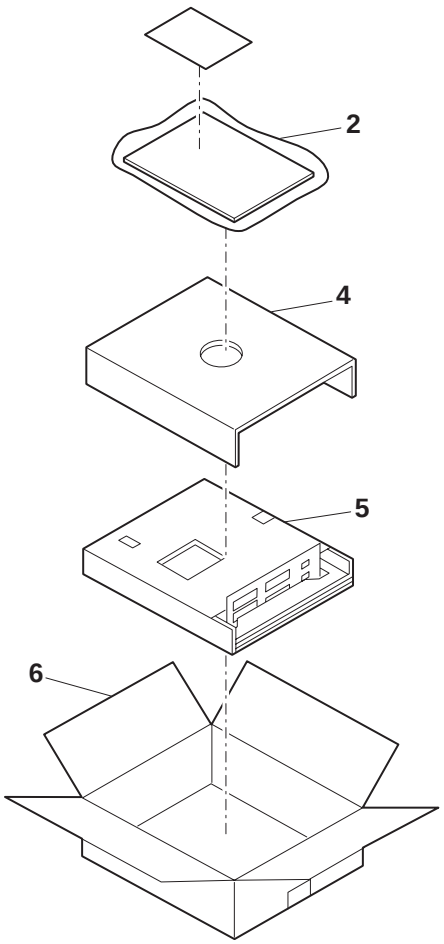
42 Packing material & Accessories[ARM11]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
2	S P A K P 2 7 9 2 R C Z Z	AE		D	Vinyl bag (460×500mm)
4	S P A K A 6 1 4 4 F C Z Z	AH	N	D	Packing add B
5	S P A K A 6 1 4 3 F C Z Z	AN	N	D	Packing add A
6	S P A K C 6 1 4 2 F C Z Z	AP	N	D	Packing case [Japan]
	S P A K C 6 1 4 2 F C 1 1	AP	N	D	Packing case [USA]
	S P A K C 6 1 4 2 F C 1 2	AP	N	D	Packing case [Europe]
	S P A K C 6 1 4 2 F C 1 3	AP	N	D	Packing case [Other countries]

42 Packing material & Accessories[ARM11]

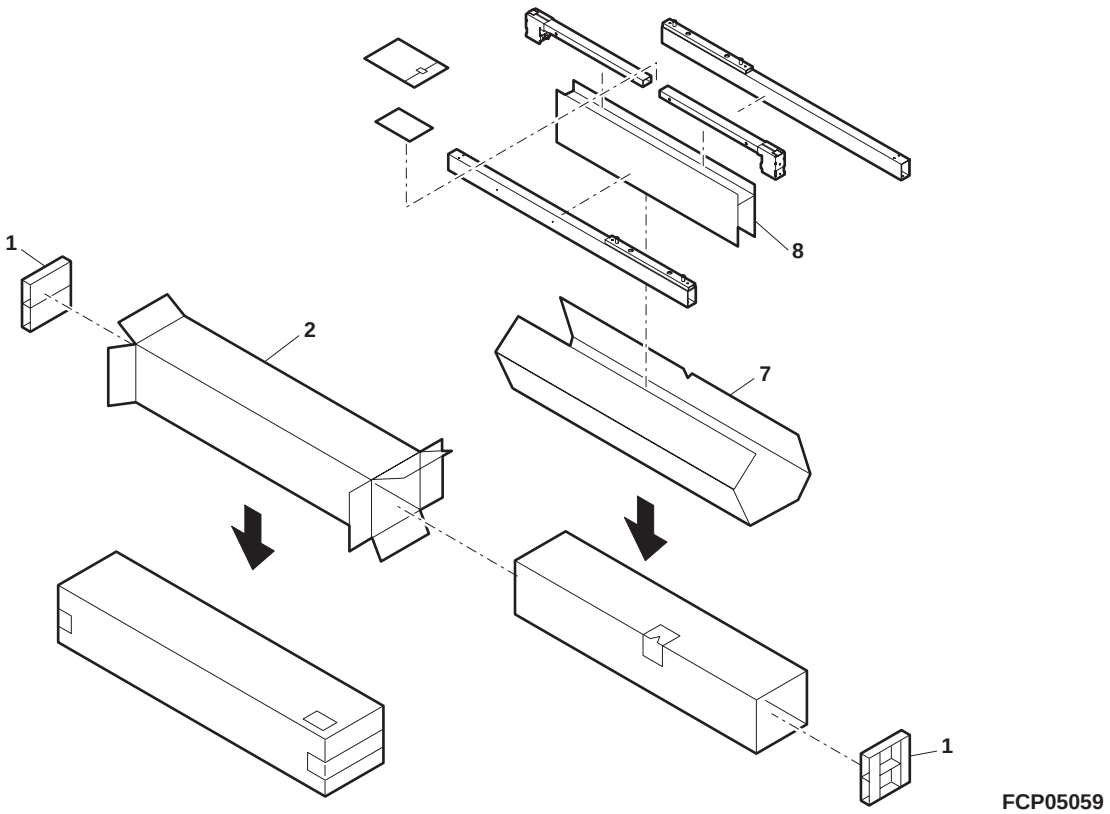


FCP05058

43 Packing Material & Accessories[AR-RK1]

NO.	PARTS CODE	PRICE RANK	NEW MARK	PART RANK	DESCRIPTION
1	S P A K A 6 1 3 6 F C Z Z	AE	N	D	Protect add
2	S P A K C 6 1 3 4 D S Z Z	AT	N	D	Packing case (Japan)
	S P A K C 6 1 3 4 D S 1 1	AT	N	D	Packing case (U.S.A Other countries)
	S P A K C 6 1 3 4 D S 1 2	AT	N	D	Packing case (Europe,U.Kngdom,Australia,New Zealand)
	S P A K C 6 1 3 4 D S 1 3	AT	N	D	Packing case (China)
7	S P A K A 6 1 3 5 F C Z Z	AK	N	D	Sleeve
8	S P A K A 6 1 3 7 F C Z Z	AK	N	D	Spacer

43 Packing Material & Accessories[AR-RK1]



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PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK	
【C】					
CARMP0147DS51	28-501	BA	N	E	
CBTN-0250FC01	29- 18	AH	N	E	
CBTN-0251FC01	29- 15	AF	N	E	
CBTN-0252FC01	29- 13	AP	N	E	
CBTN-0253FC01	29- 12	AN	N	E	
CCŌVP1541FC02	31- 5	AT	N	D	
CDAiU0619DS51	31- 1	BF	N	E	
〃	32-901	BF	N	E	
CFiLW0282FC01	29- 16	AF	N	D	
CFiLW0283FC01	29- 17	AF	N	D	
CFiLW0284FC01	29- 14	AF	N	D	
CGLSP0003RS51	27- 10	BC	N	B	
CGLSP0003RS52	27- 10	BF	N	B	
CGLSP0102DS51	27- 13	BF	N	B	
CHLDZ1446FC31	31-501	BC	N	E	
CiNSR2085FC51	17- 20	AS	N	D	
CiNSR2127FC51	17- 20	AR	N	D	
CiNSZ2086FC51	17- 20	AS	N	D	
CiNSZ2128FC51	17- 20	AR	N	D	
CPLTM0031RS51	31- 41	BS	N	E	
CPLTM5719FC01	31- 31	AG	N	C	
CPLTM5746FC01	35- 7	AE	N	C	
CPLTM5882FC02	34- 47	AN	N	C	
CPNLC0244DS51	27- 26	CV	N	D	
CPNLC0244DS52	27- 26	CT	N	D	
CPNLC0245FC01	29- 20	AY	N	D	
CPNLC0245FC02	29- 20	AY	N	D	
CPNLH0020QS12	1- 26	AK	N	D	
CPNLH0020QS13	1- 26	AK	N	D	
CPNLH0020QS22	1- 26	AK	N	D	
CPNLH0020QS23	1- 26	AK	N	D	
CPWBF1449FC31	32- 9	BH	N	E	
CPWBF1453FCE1	28- 9	BN	N	E	
CPWBF1454FCE1	31- 45	BN	N	E	
CPWBF1459DS51	33- 26	BN	N	E	
CPWBF1469FCE1	29- 11	BN	N	E	
〃	38-901	BN	N	E	
CPWBF1470DS51	29- 4	BN	N	E	
CPWBF1501DS51	33- 16	BN	N	E	
CPWBN1450FCE1	30- 13	BF	N	E	
〃	39-901	BF	N	E	
CPWBN1451DS51	30- 18	BF	N	E	
CPWBN1458FCE1	36- 1	BF	N	E	
〃	40-901	BF	N	E	
CPWBN1471FCE1	29- 1	BF	N	E	
CSFTZ2586FC31	31-502	AZ	N	E	
【D】					
DHAi-3150FCZZ	31- 40	AD	N	C	
DHAi-3152FCZZ	30- 19	AF	N	C	
DHAi-3153FCZZ	30- 38	AC	N	C	
DHAi-3161FCZZ	33- 29	AK	N	C	
DHAi-3162FCZZ	35- 13	AK	N	C	
DHAi-3166FCZZ	33- 27	AY	N	C	
DHAi-3191FCZZ	29- 6	AF	N	C	
DHAi-3192FCZZ	29- 5	AD	N	C	
DHAi-3193FCZZ	29- 22	AC	N	C	
DHAi-3281FCZZ	34- 62	AH	N	C	
DHAi-3303FCZZ	30- 28	BC	N	C	
DHAi-3336FCZZ	34- 79	AB	N	C	
DUNT-7079FCZZ	36- 4	CC	N	E	
DUNT-7132DSZZ	27- 8	CY	N	E	
DUNT-7133DSZZ	27- 8	CZ	N	E	
【G】					
GCAB-0940FCZ2	1- 5	BA	N	D	
GCAB-0942FCZZ	27- 5	AP	N	D	
〃	28- 12	AP	N	D	
GCAB-0943FCZZ	27- 1	AK	N	D	
GCAB-0945FCZZ	27- 7	AR	N	D	
【H】					
HPNLC0243FCZ1	1- 11	AP	N	D	
HPNLC0244FCZZ	29- 19	AZ	N	D	
HPNLH0246FCZZ	29- 10	BF	N	D	
【J】					
JKNBZ0141FCZZ	34- 56	AH	N	C	
【L】					
LBNDJ0043FCZZ	30- 37	AA		C	
LBSHC0161FCZZ	31- 4	AB		C	
LBSHZ1102CCZZ	28- 3	AC		C	

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK	
LDAiU0610FCZZ	30- 30	AE		D	
LDAiU0619FCZZ	32- 5	AT	N	C	
LDAiU0627FCZZ	27- 27	AZ	N	D	
LFiX-0284FCZZ	31- 12	AC		C	
LFiX-0537FCZZ	30- 39	AD		C	
LFiX-0543FCZZ	27- 12	AG	N	D	
LFiX-0544FCZZ	27- 9	AG	N	D	
LFiX-0545FCZZ	32- 12	AC	N	C	
LFiX-0568FCZZ	33- 12	AC	N	C	
LFiX-0569FCZZ	30- 46	AD	N	C	
LFRM-1022FCZZ	34- 36	AK	N	D	
LHLDW0429FCZZ	34- 52	AB		C	
LHLDW0595FCZZ	30- 35	AC		C	
LHLDW1007LCZZ	30- 34	AD		C	
LHLDW1009ACZZ	34- 40	AA		C	
〃	34- 60	AA		C	
LHLDW1115FCZZ	30- 3	AD		C	
〃	30- 14	AD		C	
LHLDW1201CCZZ	30- 45	AA		C	
LHLDW1264FCZZ	30- 36	AD		C	
LHLDW2101SCZZ	34- 59	AB		C	
LHLDZ1085FCZ2	28- 8	AD	N	C	
LHLDZ1381FCZZ	31- 44	AL		C	
LHLDZ1458FCZZ	29- 9	AF	N	C	
LHLDZ1459FCZZ	29- 7	AE	N	C	
LHLDZ1483FCZZ	34- 13	AF		C	
LHLDZ1484FCZZ	34- 67	AC	N	C	
LHLDZ1485FCZZ	34- 32	AC	N	C	
LHLDZ1486FCZZ	34- 45	AC	N	C	
LHLDZ1505FCZZ	31- 2	AC	N	C	
LPiNS0014QSGZ	29- 21	AC	N	C	
LPiNS1031HCZZ	34- 48	AA		C	
LPLTM2573FCZ1	33- 43	AD		C	
LPLTM5720FCZZ	30- 20	AK	N	C	
LPLTM5723FCZZ	30- 10	AG	N	C	
LPLTM5765FCZ1	12- 35	AH	N	C	
〃	41- 12	AH	N	C	
LPLTM5785FCZZ	34- 53	AC	N	C	
LPLTM5877FCZZ	30- 24	AE	N	C	
LPLTM5884FCZZ	34- 51	AW	N	C	
LPLTM5887FCZZ	33- 10	AL	N	C	
LPLTM5889FCZZ	34- 57	AC	N	C	
LPLTM5891FCZZ	35- 1	AE	N	C	
LPLTM5927FCZZ	30- 22	AF	N	C	
LPLTM5928FCZZ	34- 23	AG	N	C	
LPLTM5929FCZZ	34- 61	AR	N	C	
LPLTM5930FCZZ	35- 5	AD	N	C	
LPLTM5932FCZZ	35- 24	AC		C	
LPLTP5743FCZZ	33- 17	AF		C	
LPLTP5747FCZZ	35- 8	AC	N	C	
LPLTP5748FCZZ	35- 32	AD	N	C	
LPLTP5777FCZZ	33- 38	AG	N	D	
LPLTP5778FCZZ	33- 37	AG	N	D	
LPLTP5938FCZZ	33- 44	AC	N	C	
LPLTP5960FCZZ	30- 44	AE	N	C	
LRALM0183FCZZ	30- 31	AG	N	C	
LRALM0184FCZZ	30- 41	AG	N	C	
LSŌU-0177FCGZ	37- 2	AP		D	
LSŌU-0179FCZZ	37- 2	AR		D	
LSTPP0314FCZZ	35- 21	AA		C	
LSTPP0353FCZZ	35- 3	AE	N	C	
LSTPP0359FCZZ	34- 65	AE	N	C	
LSTYM0261FCZZ	32- 11	AB	N	C	
LSTYM0288FCZZ	34- 31	AK	N	C	
LX-BZ0004QSZZ	30- 42	AB		C	
LX-BZ0049FCZZ	31- 19	AB		C	
LX-BZ0324FCZZ	31- 22	AA		C	
LX-BZ0465FCZZ	27- 24	AA		C	
LX-BZ0680FCZZ	36- 5	AB		C	
LX-BZ0776FCZZ	27- 6	AG		C	
LX-BZ0787FCZZ	37- 5	AH		C	
LX-BZ0828FCZZ	12- 56	AD		C	
〃	41- 3	AD		C	
LX-BZ0842FCZZ	27- 4	AG		C	
LX-BZ0921FCZ1	12- 25	AE	N	C	
〃	41- 4	AE	N	C	
LX-BZ0931FCZZ	34- 76	AC	N	C	
LX-WZ0119FCZZ	31- 35	AA		C	
【M】					
MARMP0147FCZ2	28- 10	AK	N	C	
MARMP0148FCZ2	28- 1	AK	N	C	

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK	
MARMP0243FCZZ	33- 41	AD		C	
MARMP0248FCZZ	35- 15	AE		C	
MARMP0284FCZZ	34- 26	AC	N	C	
MHNG-0208FCZZ	33- 7	BA	N	C	
MHNG-0209FCZZ	34- 34	BC	N	C	
MLEVP0794FCZZ	33- 34	AC	N	C	
MLEVP0796FCZZ	35- 14	AC	N	C	
MLEVP0797FCZZ	35- 26	AC	N	C	
MLEVP0804FCZZ	35- 16	AC	N	C	
MLEVP0837FCZZ	34- 70	AC	N	C	
MSLi-0138FCZZ	31- 15	AC		C	
〃	32- 8	AC		C	
MSPRC2865FCZ1	27- 21	AB	N	C	
MSPRC3001FCZZ	34- 69	AB	N	C	
MSPRD2870FCZ1	35- 22	AC	N	C	
MSPRD2879FCZZ	35- 27	AB	N	C	
MSPRD3002FCZZ	34- 33	AC	N	C	
MSPRD3020FCZ1	31- 49	AG	N	C	
MSPRP2825FCZZ	32- 14	AC	N	C	
MSPRP2830FCZZ	33- 19	AA		C	
MSPRP2832FCZZ	35- 17	AC	N	C	
MSPRP2878FCZZ	34- 8	AC	N	C	
MSPRP3009FCZZ	29- 2	AD	N	C	
MSPRP3011FCZZ	34- 39	AC	N	C	
MSPRT1563FCZZ	28- 7	AC		C	
MSPRT2846FCZZ	31- 30	AC	N	C	
MSPRT2863FCZZ	35- 31	AB	N	C	
MSPRT2864FCZZ	35- 9	AC	N	C	
【N】					
NBLTH0329FCZZ	31- 18	AG	N	B	
NBLTH0363FCZZ	34- 18	AG	N	B	
NBLTH0364FCZZ	34- 44	AG	N	B	
NBRGC0133FCZ1	31- 42	AC		C	
NBRGC0136FCZZ	34- 12	AC		C	
NBRGM0096FCZ1	34- 17	AB		C	
NGERH0027QSZZ	31- 33	AH		C	
NGERH1476FCZZ	34- 42	AD	N	C	
NGERH1477FCZZ	34- 37	AC	N	C	
NGERH1478FCZZ	34- 43	AE	N	C	
NGERP1385FCZZ	33- 22	AF		C	
NGERR1386FCZZ	33- 21	AE		C	
NPLYZ0005QSZZ	31- 24	AG		C	
NPLYZ0006QSZZ	31- 26	AD		C	
NPLYZ0013QSZZ	31- 23	AL		C	
NPLYZ0338FCZZ	31- 20	AN		C	
NPLYZ0375FCZZ	34- 46	AC		C	
NPLYZ0397FCZZ	34- 20	AK		C	
NPLYZ0398FCZZ	34- 16	AC		C	
NPLYZ0399FCZZ	31- 9	AG	N	C	
NRŌLP0011QSZZ	27- 18	AD		C	
NRŌLP1364FCZZ	34- 28	AC		C	
NRŌLR1312FCZZ	34- 19	AN		C	
NRŌLR1317FCZZ	34- 21	AP		C	
NRŌLR1318FCZZ	34- 30	AR	N	C	
NRŌLR1320FCZZ	34- 50	AQ	N	C	
NSFTZ1805FCZZ	28- 5	AE		C	
NSFTZ2586FCZZ	31- 25	AS	N	C	
NSFTZ2599FCZ1	34- 10	AW	N	C	
NSFTZ2600FCZZ	34- 7	AM	N	C	
NSFTZ2601FCZZ	27- 20	AH	N	C	
NSFTZ2659FCZZ	35- 23	AR	N	C	
NSFTZ2678FCZZ	34- 15	AL	N	C	
【P】					
PBRSS0209FCZZ	34- 77	AG	N	B	
PCAPH0010GCZZ	26- 1	AD		D	
PCLC-0302FCZZ	34- 22	AT	N	B	
PCLC-0303FCZZ	34- 14	AT	N	B	
PCLR-0426FCZZ	34- 49	AD		C	
PCLR-0471FCZZ	34- 6	AG	N	C	
PCŌVP1468FCZZ	26- 2	AD		D	
PCŌVP1518FCZZ	33- 9	AE		D	
PCŌVP1549FCZZ	33- 39	AU	N	D	
PCŌVP1557FCZZ	12- 38	AC		C	
〃	41- 5	AC		C	
PCŌVP1560FCZZ	12- 37	AC	N	C	
〃	41- 6	AC	N	C	
PCŌVP1566FCZZ	27- 3	AS	N	D	
PCŌVP1593FCZZ	36- 3	AF	N	D	
PCŌVP1594FCZZ	34- 1	AG	N	D	
PCŌVP1595FCZZ	33- 3	AG	N	D	
PCŌVP1598FCZZ	30- 26	AL	N	D	

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK	
PCŌVP1599FCZZ	30- 1	AG	N	D	
PCŌVP1600FCZZ	30- 6	AF	N	D	
PCŌVP1615FCZZ	33- 5	AE	N	D	
PCŌVP1624FCZZ	27- 23	AC	N	D	
PCŌVP1644FCZZ	33- 14	AD	N	C	
PCŌVP1645FCZZ	33- 24	AH	N	C	
PCUSF0334FCZZ	32- 10	AP		C	
PCUSS0372FCZZ	34- 64	AD	N	C	
PCUSS0373FCZZ	34- 72	AB	N	C	
PCUSU0203FCZZ	31- 7	AE		C	
〃	32- 6	AE		C	
PGiDH1897FCZZ	34- 74	AT	N	C	
PGiDM1890FCZZ	31- 8	AC	N	C	
PGiDM1899FCZZ	35- 30	AY	N	C	
PGiDM1900FCZZ	27- 16	AR	N	C	
PGiDM1901FCZZ	27- 17	AQ	N	C	
PGiDM1953FCZZ	34- 4	AS	N	C	
PGiDM1964FCZZ	31- 50	AC	N	C	
PGLSP0103FCZZ	34- 75	AV	N	C	
PGUMS0002QSZZ	31- 32	AL		C	
PGUMS0283FCZ1	30- 29	AA	N	C	
PGUMS0296FCZZ	33- 20	AD	N	C	
PGUMS0298FCZZ	33- 15	AC	N	C	
PGUMS0299FCZZ	33- 25	AH	N	C	
PMAGT0072FCZZ	35- 11	AF		C	
PMiR-0164FCZZ	32- 13	AP	N	B	
PMiR-0165FCZZ	31- 13	AP	N	B	
PMLT-1256FCZZ	27- 29	AC	N	C	
PMLT-1257FCZZ	27- 30	AB	N	C	
PMLT-1270FCZZ	34- 55	AB	N	C	
PMLT-1271FCZZ	35- 28	AB	N	C	
PMLT-1272FCZZ	34- 3	AB	N	C	
〃	35- 2	AB	N	C	
PMLT-1282FCZZ	30- 47	AE	N	C	
PMLT-1284FCZZ	36- 8	AE	N	C	
PMLT-1286FCZZ	33- 2	AD	N	C	
PREFL0172FCZZ	32- 3	AK		B	
PRNGP0090FCZZ	33- 42	AA		C	
PSHEP4846FCZZ	34- 58	AD	N	C	
PSHEP4848FCZZ	35- 20	AB	N	C	
PSHEP4915FCZZ	34- 5	AE	N	C	
PSHEP4916FCZ1	34- 73	AF	N	C	
PSHEP4927FC10	17- 13	AR	N	D	
PSHEP4927FC11	17- 13	AR	N	D	
PSHEP4927FCZ1	17- 13	AR	N	D	
PSHEP4927FCZ2	17- 13	AM	N	D	
PSHEP4927FCZ3	17- 13	AR	N	D	
PSHEP4927FCZ4	17- 13	AR	N	D	
PSHEP4927FCZ5	17- 13	AR	N	D	
PSHEP4927FCZ6	17- 13	AR	N	D	
PSHEP4927FCZ7	17- 13	AR	N	D	
PSHEP4927FCZ8	17- 13	AR	N	D	
PSHEP4927FCZ9	17- 13	AR	N	D	
PSHEP4927FCZZ	17- 13	AM	N	D	
PSHEP4932FCZZ	30- 7	AD	N	C	
PSHEP4937FCZZ	35- 29	AB	N	C	
PSHEZ4836FCZZ	30- 43	AB	N	C	
PSHEZ4841FCZ1	30- 40	AD	N	C	
PSHEZ4842FCZZ	30- 27	AD	N	C	
PSHEZ4843FCZZ	30- 32	AC	N	C	
PSHEZ4845FCZZ	33- 1	AV	N	C	
PSHEZ4847FCZZ	35- 19	AL	N	C	
PSHEZ4878FCZZ	35- 18	AC	N	C	
PSHEZ4906FCZZ	29- 24	AC	N	C	
PSHEZ4949FCZZ	34- 38	AE	N	C	
PSHEZ4957FCZZ	34- 78	AC	N	C	
PSLDH0178FCZZ	28- 4	AD		C	
PSPŌ-0001QSZZ	27- 19	AB		C	
PTPE-0265FCZZ	33- 13	AC	N	C	
PWiR-0191FCZZ	31- 17	AQ	N	B	
PWiR-0192FCZZ	31- 16	AQ	N	B	
【Q】					
QCNCM0041QSZZ	26- 3	AP		C	
QCNCM0828FCZZ	39- 1	AE		C	
QCNCM0829FCZZ	39- 2	AG		C	
QCNCM0880FCZZ	40- 1	AF		C	
QCNCM0923FC12	40- 2	AE		C	
QCNCM1146FCZZ	26- 4	AE	N	C	
QCNCM1148FCZZ	26- 5	AP	N	C	
QCNCM1166FCZZ	39- 3	AK	N	C	
QCNCM1167FCZZ	39- 4	AP	N	C	

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK	
QCNCM1171FCZZ	38- 1	AE	N	C	
QCNCM7014SC1C	39- 5	AC		C	
QCNCM7022SC0C	39- 6	AB		C	
QCNCM7022SC0E	39- 7	AB		C	
QCNCM7022SC0F	39- 8	AB		C	
QCNCW0885FCZZ	39- 9	AG		C	
QCNCW0946FCZZ	26- 6	AH		C	
QCNCW1134FCZZ	38- 2	AH		C	
QCNCW1147FCZZ	26- 7	AL	N	C	
QCNCW1149FCZZ	26- 8	AN	N	C	
QCNCW1160FCZZ	40- 3	AD	N	C	
QCNCW7040XC8J	39- 10	AP		C	
QCNW-0165FCZZ	30- 15	AH	N	C	
QCNW-0166FCZZ	29- 25	AE	N	C	
QCNW-0167FCZZ	30- 5	AM	N	C	
QCNW-0168FCZZ	30- 4	AE	N	C	
〃	32- 7	AE	N	C	
QCNW-0170FCZZ	36- 6	AH	N	C	
QCNW-0181FCZZ	30- 16	AH	N	C	
QFS-D132CQCZZ	26- 9	AG		A	
QFSHB0028FCZZ	26- 10	AC		C	
QPiN-0003GCZZ	26- 11	AC		C	
QSŌCZ0001QSZZ	26- 12	AL		C	
QSŌCZ0002QSZZ	39- 11	AD		C	
QSŌCZ0071FCZZ	39- 12	AP		C	
QSŌCZ0073FCZZ	26- 13	AL		C	
QSŌCZ0079FCZZ	26- 14	AN		C	
QSŌCZ6428ACZZ	26- 15	AE		C	
〃	39- 13	AE		C	
QSW-P0005QSZZ	38- 3	AC		B	
QSW-Z0531FCZZ	34- 63	AL		B	
【R】					
RALMB1002LCZZ	38- 4	AE		B	
RC-KZ0008QCZZ	38- 5	AB	N	C	
RCŌRF0041FCZZ	27- 31	AH	N	C	
RCRMZ6007RCZZ	39- 14	AD		B	
RCRS-0007FCZZ	38- 6	AD		B	
RCRSP6676RCZZ	26- 16	AG		B	
RCRSZ0001QSZZ	39- 15	AG		B	
RCRUA0005FCZZ	26- 17	AP		B	
RCRUA0007FCZZ	26- 18	AP		B	
RCRUA0008FCZZ	26- 19	AP		B	
RCRUA0009FCZZ	26- 20	AP		B	
RCRUA0012FCZZ	26- 21	AP		B	
RFiLN0048FCZZ	26- 22	AC		C	
RFiLN0049FCZZ	39- 16	AE	N	C	
RFiLN0051FCZZ	26- 23	AC	N	C	
RFiLN6012RCZZ	39- 17	AB		C	
〃	40- 4	AB		C	
RFiLZ1005LCZZ	39- 18	AB		C	
〃	40- 5	AB		C	
RH-DZ0016FCZZ	38- 7	AB		B	
RH-iX2196SCZZ	39- 19	AG		B	
RLMPD0658FCZZ	32- 1	BA	N	B	
RMŌTS0857FCZZ	31- 27	AZ	N	B	
RMŌTS0876FCZZ	34- 35	BD	N	B	
RMPTR4100ACZZ	26- 24	AB		B	
RMPTR4103ACZZ	26- 25	AB		B	
〃	39- 20	AB		B	
RMPTR4330ACZZ	26- 26	AB		B	
RMPTR4472ACZZ	26- 27	AB		B	
RPLU-0336FCZZ	34- 25	AS	N	B	
RPLU-0347FCZZ	35- 12	AQ	N	B	
【S】					
SPAKA0307QSZZ	37- 3	AD		D	
SPAKA6075DSZZ	37- 1	AA	N	D	
SPAKA6132FCZZ	37- 6	AT	N	D	
SPAKA6133FCZZ	37- 8	AU	N	D	
SPAKA6135FCZZ	43- 7	AK	N	D	
SPAKA6136FCZZ	43- 1	AE	N	D	
SPAKA6137FCZZ	43- 8	AK	N	D	
SPAKA6143FCZZ	42- 5	AN	N	D	
SPAKA6144FCZZ	42- 4	AH	N	D	
SPAKA6265FCZZ	37- 10	AC	N	D	
SPAKC6118DS12	17- 5	AU	N	D	
SPAKC6118DS13	17- 5	AU	N	D	
SPAKC6122DS17	17- 5	AU	N	D	
SPAKC6122DS18	17- 5	AU	N	D	
SPAKC6122DS19	17- 5	AU	N	D	
SPAKC6122DS20	17- 5	AU	N	D	
SPAKC6122DS21	17- 5	AU	N	D	

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK	
SPAKC6122DS22	17- 5	AU	N	D	
SPAKC6131DS11	37- 9	AF	N	D	
SPAKC6131DSZZ	37- 9	AF	N	D	
SPAKC6134DS11	43- 2	AT	N	D	
SPAKC6134DS12	43- 2	AT	N	D	
SPAKC6134DS13	43- 2	AT	N	D	
SPAKC6134DSZZ	43- 2	AT	N	D	
SPAKC6142FC11	42- 6	AP	N	D	
SPAKC6142FC12	42- 6	AP	N	D	
SPAKC6142FC13	42- 6	AP	N	D	
SPAKC6142FCZZ	42- 6	AP	N	D	
SPAKP2792RCZZ	42- 2	AE		D	
SSAKZ0003QSZZ	37- 7	AF		D	
【T】					
TCADZ1178FCZZ	37- 4	AB		D	
TiNSD2092GHZZ	17- 20	AS	N	D	
TiNSD2134GHZZ	17- 20	AS	N	D	
TiNSE2077FCZZ	17- 20	AQ	N	D	
TiNSE2078FCZZ	17- 20	AW	N	D	
TiNSE2081GHZZ	17- 20	AS	N	D	
TiNSE2087FCZZ	17- 20	AX	N	D	
TiNSE2119FCZZ	17- 20	AN	N	D	
TiNSE2120FCZZ	17- 20	AV	N	D	
TiNSE2123GHZZ	17- 20	AS	N	D	
TiNSE2129FCZZ	17- 20	AV	N	D	
TiNSE2181FCZZ	17- 20	AT	N	D	
TiNSF2079FCZZ	17- 20	AW	N	D	
TiNSF2121FCZZ	17- 20	AV	N	D	
TiNSG2080GHZZ	17- 20	AS	N	D	
TiNSG2122GHZZ	17- 20	AS	N	D	
TiNSH2084GHZZ	17- 20	AS	N	D	
TiNSH2126GHZZ	17- 20	AS	N	D	
TiNSi2083GHZZ	17- 20	AS	N	D	
TiNSi2125GHZZ	17- 20	AS	N	D	
TiNSJ2076FCZZ	17- 20	AQ	N	D	
TiNSJ2118FCZZ	17- 20	AN	N	D	
TiNSS2082FCZZ	17- 20	AW	N	D	
TiNSS2124FCZZ	17- 20	AV	N	D	
TiNSW2089GHZZ	17- 20	AS	N	D	
TiNSW2131GHZZ	17- 20	AS	N	D	
TiNSZ2090GHZZ	17- 20	AS	N	D	
TiNSZ2091GHZZ	17- 20	AS	N	D	
TiNSZ2093GHZZ	17- 20	AS	N	D	
TiNSZ2094GHZZ	17- 20	AS	N	D	
TiNSZ2095GHZZ	17- 20	AS	N	D	
TiNSZ2132GHZZ	17- 20	AS	N	D	
TiNSZ2133GHZZ	17- 20	AS	N	D	
TiNSZ2135GHZZ	17- 20	AS	N	D	
TiNSZ2136GHZZ	17- 20	AS	N	D	
TiNSZ2137GHZZ	17- 20	AS	N	D	
TLABH4440FCZZ	33- 45	AF		D	
TLABZ4335FCZZ	32- 15	AB		D	
【U】					
UBATi0014FCZZ	26- 28	AN		B	
【V】					
VCCCCZ1HH101J	26- 29	AA		C	
〃	40- 6	AA		C	
VCCCCZ1HH220J	26- 30	AA		C	
〃	39- 21	AA		C	
VCEAGA1AW476M	39- 22	AA		C	
VCEAGA1AW477M	39- 23	AB		C	
VCEAGA1CW477M	39- 24	AB		C	
VCEAGA1HW224M	39- 25	AA		C	
VCEAGA1VW476M	39- 26	AB		C	
VCEAJU1CW476M	38- 8	AB		C	
VCEAPH1HC105M	26- 31	AC		C	
VCEAPS1AC227M	26- 32	AD		C	
VCEAPS1CC106M	26- 33	AC		C	
VCEAPS1CC226M	26- 34	AC		C	
VCEAPS1CC476M	26- 35	AC		C	
VCEAYU1EC476M	40- 7	AC	N	C	
VCEAYU1VC476M	40- 8	AC	N	C	
VCEAZU1VW477M	39- 27	AD		C	
VCKYCZ1CB103K	39- 28	AA		C	
VCKYCZ1CF104Z	26- 36	AB		C	
〃	40- 9	AB		C	
VCKYCZ1EF223Z	39- 29	AA		C	
VCKYCZ1HB102K	26- 37	AA		C	
〃	39- 30	AA		C	
〃	40- 10	AA		C	
VCKYCZ1HB222K	39- 31	AA		C	

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK	
VCKYCZ1HF103Z	26- 38	AA		C	
〃	39- 32	AA		C	
〃	40- 11	AA		C	
VCKYPU1EB223Z	38- 9	AB		C	
VCKYPU1HB101K	38- 10	AA		C	
VCQYNA1HM103K	39- 33	AA		C	
VHD1SS133//-1	38- 11	AA		B	
VHDDAN202K/-1	39- 34	AB		B	
VHDDAP202K/-1	39- 35	AB		B	
VHDDAP202U/-1	26- 39	AB		B	
VHDDSM1D1//-1	39- 36	AB		B	
VHDM1FL20U+-1	39- 37	AC	N	B	
VHDMA704A//-1	39- 38	AC		B	
VHDRB451F//-1	26- 40	AD		B	
VHDRLS73///-1	26- 41	AA		B	
VHEHZS3B3//-1	39- 39	AB		B	
VHi28F081L02C	30- 12	BB	N	B	
VHi28F322L01F	12- 54	BE	N	B	
〃	41- 1	BE	N	B	
VHi28F322L02F	12- 55	BF	N	B	
〃	41- 2	BF	N	B	
VHi28F322L03F	12- 54	BF	N	B	
〃	41- 1	BF	N	B	
VHi28F322L04F	12- 55	BL	N	B	
〃	41- 2	BL	N	B	
VHi65946P07-1	26- 42	BA		B	
VHi74LCX08MTC	26- 43	AE		B	
VHi74LCX14MTC	26- 44	AE		B	
VHi74LCX244MT	26- 45	AG		B	
VHi74LCX32MTC	26- 46	AE		B	
VHi74LVX16128	26- 47	AP		B	
VHi74VHC04M-1	39- 40	AE	N	B	
〃	40- 12	AE	N	B	
VHi74VHC32M-1	39- 41	AD	N	B	
VHi74VHCT240X	40- 13	AF		B	
VHi7SZ125M5-1	40- 14	AE	N	B	
VHi90LV17AW-1	26- 48	AP		B	
〃	39- 42	AP		B	
VHi90LV27AW-1	40- 15	AQ	N	B	
VHiD65943GJ-1	39- 43	AY	N	B	
VHiD82825GM-1	40- 16	BK	N	B	
VHiDS14C238//	26- 49	AT		B	
VHiEEP64-120P	26- 50	AW		B	
VHiEES04L400P	39- 44	AG		B	
VHiFS781BZB-1	40- 17	AP		B	
VHiH8S2322R-1	39- 45	AZ		B	
VHiHG73C095-1	26- 51	AY		B	
VHiHN58V65A-1	39- 46	AW		B	
VHiKS0U1347-1	26- 52	BN		B	
VHiLCX157MT-1	26- 53	AG		B	
VHiLCX16244-1	26- 54	AM		B	
VHiLCX16245-1	26- 55	AM		B	
VHiLCX16373-1	26- 56	AM		B	
VHiLCX74MTC-1	26- 57	AE		B	
VHiLM324D++-1	39- 47	AE		B	
VHiLM339D++-1	39- 48	AE		B	
VHiLM393D++-1	26- 58	AE		B	
VHiLV25612J-1	39- 49	AQ		B	
VHiLVT240MT-1	26- 59	AL		B	
VHiM3064ATC-1	40- 18	AX	N	B	
VHiM87J4810-1	26- 60	BK		B	
VHiMTD1361F-1	39- 50	AR		B	
VHiN2370R04-1	26- 61	AF		B	
VHiN2370R33-1	26- 62	AF		B	
VHiN2391D25-1	26- 63	AG		B	
VHiNJM317DL-1	26- 64	AK		B	
VHiNJU6356E-1	26- 65	AK		B	
VHiPi6C2309-1	26- 66	AR		B	
VHiPM2500++-1	26- 67	BP		B	
VHiPST598DN-1	26- 68	AF		B	
VHiPST598iN-1	26- 69	AF		B	
VHiS1340AF+-1	38- 12	AH		B	
VHiSD4M16L1-1	26- 70	AZ		B	
VHiSD8M16L1-1	26- 71	BB		B	
VHiSR1024-7LL	26- 72	AU		B	
VHiT4955A20-1	26- 73	BF		B	
VHiTD62003AP1	39- 51	AG		B	
VHiTD62503F/-	39- 52	AG		B	
VHiTD62503F-1	26- 74	AF		B	
VHiVHC244SJ-1	39- 53	AG	N	B	
〃	40- 19	AG	N	B	

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK	
VHP1LHEE-002A	26- 75	AC		B	
VHP1LHLE-002A	38- 13	AC		B	
VHPGP1A22LC-1	31- 38	AK		B	
VHPGP1A73A+-1	33- 33	AG		B	
〃	34- 68	AG		B	
〃	35- 10	AG		B	
VHPGP3A38//-1	31- 36	AH		B	
VHPLT9400E/-1	38- 14	AK		B	
VHV1608C080-1	26- 76	AC		B	
VHViCPS1.2/-1	26- 77	AF		B	
VRD-HT2EY101J	38- 15	AA		C	
VRD-HT2EY102J	38- 16	AA		C	
VRD-HT2EY163J	39- 54	AA		C	
VRD-HT2EY302J	38- 17	AA		C	
VRD-HT2EY331J	38- 18	AA		C	
VRD-HT2EY471J	38- 19	AA		C	
VRD-HT2EY911J	39- 55	AA		C	
VRS-CZ1JD000J	26- 78	AA		C	
〃	39- 56	AA		C	
〃	40- 20	AA		C	
VRS-CZ1JD100J	26- 79	AA		C	
VRS-CZ1JD101J	26- 80	AA		C	
〃	39- 57	AA		C	
〃	40- 21	AA		C	
VRS-CZ1JD102J	26- 81	AA		C	
〃	39- 58	AA		C	
〃	40- 22	AA		C	
VRS-CZ1JD103F	39- 59	AA		C	
VRS-CZ1JD103J	26- 82	AA		C	
〃	39- 60	AA		C	
VRS-CZ1JD122J	39- 61	AA		C	
VRS-CZ1JD151J	39- 62	AA		C	
VRS-CZ1JD183J	26- 83	AA		C	
VRS-CZ1JD203J	39- 63	AA		C	
VRS-CZ1JD220J	26- 84	AA		C	
VRS-CZ1JD221J	26- 85	AA		C	
VRS-CZ1JD222J	26- 86	AA		C	
〃	39- 64	AA		C	
〃	40- 23	AA		C	
VRS-CZ1JD303F	39- 65	AA		C	
VRS-CZ1JD303J	39- 66	AA	N	C	
VRS-CZ1JD330J	26- 87	AA		C	
VRS-CZ1JD332F	40- 24	AA		C	
VRS-CZ1JD332J	26- 88	AA		C	
VRS-CZ1JD333J	26- 89	AA		C	
VRS-CZ1JD470J	26- 90	AA		C	
VRS-CZ1JD472J	26- 91	AA		C	
VRS-CZ1JD511J	26- 92	AA		C	
VRS-CZ1JD561J	39- 67	AA		C	
VRS-CZ1JD562J	39- 68	AA		C	
VRS-CZ1JD621J	39- 69	AA		C	
VRS-CZ1JD624J	39- 70	AA	N	C	
VRS-CZ1JD681J	39- 71	AA		C	
VRS-CZ1JD750J	26- 93	AA		C	
VRS-CZ1JD752J	39- 72	AA		C	
VRS-CZ1JD823J	26- 94	AA		C	
VRS-CZ1JD911J	39- 73	AA	N	C	
VRS-RE3DA1R0J	39- 74	AB		C	
VS2SB1197//-1	39- 75	AC		B	
VS2SC1740SR-1	38- 20	AB		B	
VS2SK3065++-1	39- 76	AG	N	B	
VSDTA114YK/-1	39- 77	AC		B	
VSDTC114EK/-1	26- 95	AB		B	
VSDTC114YK/-1	26- 96	AC		B	
〃	39- 78	AC		B	
VSDTC114YS/-1	38- 21	AB		B	
VSUPA502T//-1	26- 97	AD		B	
〃	39- 79	AD		B	
VVLLM065HB1-1	29- 8	CB	N	B	
【X】					
XBBS230P10000	35- 35	AA		C	
XBBSD30P06000	12- 51	AA		C	
〃	34- 24	AA		C	
〃	36- 2	AA		C	
〃	41- 7	AA		C	
XBBSD30P12000	32- 4	AA		C	
XBBSD40P06000	30- 17	AA		C	
〃	31- 3	AA		C	
XBBSD40P08000	36- 7	AA		C	
XBBSD40P10000	31- 39	AA		C	
XBBSD40P14000	31- 37	AA		C	

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK	
XBBSE30P06000	30- 9	AA		C	
XBPSD26P06000	12- 26	AA		C	
〃	41- 8	AA		C	
XBPSD30P05K00	31- 28	AA		C	
XBPSD30P06000	12- 47	AA		C	
〃	41- 9	AA		C	
XBPSD30P06KS0	28- 2	AA		C	
XBPSD40P06KS0	31- 10	AA		C	
XBPSD40P16KS0	31- 29	AA		C	
XBTSC50P16000	27- 11	AA		C	
XBTSE40P06000	27- 15	AA		C	
XEBSD30P08000	32- 2	AA		C	
〃	33- 18	AA		C	
〃	34- 9	AA		C	
〃	35- 6	AA		C	
XEBSD40P16000	33- 35	AA		C	
XEBSE30P08000	27- 22	AA		C	
〃	33- 40	AA		C	
XEBSE30P10000	33- 30	AA		C	
XEBSE40P08000	27- 28	AA		C	
XEBSE40P10000	33- 6	AA		C	
〃	35- 25	AA		C	
XEPSD30P05000	28- 11	AA		C	
XEPSD30P06X00	33- 23	AA		C	
XEPSD30P08000	29- 3	AA		C	
XEPSD40P06000	31- 47	AA		C	
XESSE30P08000	33- 28	AA		C	
XHBSD30P04000	30- 2	AA		C	
〃	31- 6	AA		C	
XHBSD30P06000	27- 14	AA		C	
〃	30- 25	AA		C	
〃	31- 48	AA		C	
XHBSD30P08000	27- 25	AA		C	
XHBSD30P14000	34- 66	AA		C	
XHBSD40P06000	31- 46	AA		C	
XHBSE30P06000	12- 50	AA		C	
〃	33- 4	AA		C	
〃	34- 2	AA		C	
〃	35- 34	AA		C	
〃	41- 11	AA		C	
XHBSE30P10000	34- 71	AA		C	
XHBSE40P08000	27- 2	AA		C	
〃	30- 11	AA		C	
〃	33- 11	AA		C	
〃	34- 41	AA		C	
XRESP20-04000	34- 54	AA		C	
XRESP30-06000	28- 6	AA		C	
XRESP40-05000	31- 43	AA		C	
XRESP40-06000	34- 11	AA		C	
XRESP50-06000	34- 27	AA		C	
XRESP70-08000	31- 21	AA		C	
〃	31- 34	AA		C	
〃	34- 29	AA		C	

PARTS CODE	NO.	PRICE RANK	NEW MARK	PART RANK	

CAUTION FOR BATTERY REPLACEMENT

(Danish) ADVARSEL !
Lithiumbatteri - Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri
af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandoren.

(English) Caution !
Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type
recommended by the manufacturer.
Dispose of used batteries according to manufacturer's instructions.

(Finnish) VAROITUS
Paristo voi räjähtää,jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan
tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden
mukaisesti.

(French) ATTENTION
Il y a danger d'explosion s'il y a remplacement incorrect
de la batterie. Remplacer uniquement avec une batterie du
même type on d'un type équivalent recommandé par
le constructeur.
Mettre au rébut les batteries usagées conformément aux
instructions du fabricant.

(Swedish) VARNING
Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent
typ som rekornmenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens
Instruktion.

(German) Achtung
Explosionsgefahr bei Verwendung inkorrekter Batterien.
Als Ersatzbatterien dürfen nur Batterien vom gleichen Typ oder
vom Hersteller empfohlene Batterien verwendet werden.
Entsorgung der gebrauchten Batterien nur nach den vom
Hersteller angegebenen Anwerisugen.

CAUTION FOR BATTERY DISPOSAL

(For USA,CANADA)
Contains lithium-ion battery. Must be disposed of properly.
Remove the battery from the product and contact
federal or state environmental
agencies for information on recycling and disposal options.

SHARP

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SHARP SERVICE MANUAL

CODE: 00ZARNC5J/A1E

DIGITAL LASER COPIER/PRINTER OPTION
PRINT SERVER CARD

MODEL AR-NC5J
AR-NC5JG
AR-NC5JW

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Parts marked with "⚠" are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

SHARP CORPORATION

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[1] GENERAL

The AR-NC5J is a print server with Falcon 32bit RISC chip, which automatically switches between 10BASE-T/100BASE-TX, conforming to network protocols of TCP/IP (Windows95, Windows98, WindowsMe, WindowsNT4.0, Windows2000, UNIX), IPX/SPX (Netware), AppleTalk (Macintosh), and NetBEUI (Windows95, Windows98, WindowsMe, WindowsNT4.0, Windows2000). The 32bit CPU, together with the automatic switch of 10/100BASE, provides high-speed process. This server allows to share printers in a wide range of network environments from a small-sized network by means of NetBEUI to a large-scale network where two or more network protocols are intermingled.

[2] ENVIRONMENT

1. Items required for connection to a network

- Shield-type, twisted-pair cable (A cable of Category 5 is required for 100BASE-TX.)
- Printer

2. Network computer

- Windows95/98/Me/NT4.0/2000
  (One of TCP/IP, NetWare, or NetBEUI must be available.)
- UNIX
- NetWare
- Macintosh (AppleTalk must be available.)

[3] MAJOR FUNCTIONS

1. Functions

A. Automatic IP address setup by DHCP, BOOTP, RARP

(1) DHCP/BOOTP

The AR-NC5J, equipped with the DHCP/BOOTP protocols, allows to make setups related to TCP/IP in a network where a DHCP/BOOTP server is working.

By enabling the DHCP/BOOTP setup of the AR-NC5J, the information related to TCP/IP which is valid in the DHCP/BOOTP server can be set to the AR-NC5J.

- The DHCP protocol supported by the AR-NC5J basically conforms to RFC2131/2132. It conforms to Windows NT DHCP servers.
- To utilize the DHCP function of the AR-CN5J, consult the network manager.

(2) RARP

The AR-NC5J, equipped with the RARP protocol, allows to make setup of IP address in a network where a RARP server is working.

By enabling the RARP setup of the AR-NC5J, the IP address set in the RARP server can be assigned to the AR-NC5J.

B. IPP conformity (TCP/IP)

The AR-NC5J conforms to the Internet printing protocol (IPP Ver.1.0) which allows to print via the Internet. By using the IPP, it allows to print with a remote printer as well as Web access by HTTP.

C. WWW browser

The AR-NC5J, equipped with the HTTP server, can be accessed by a WWW browser to display the printer status or to change the printer setup.

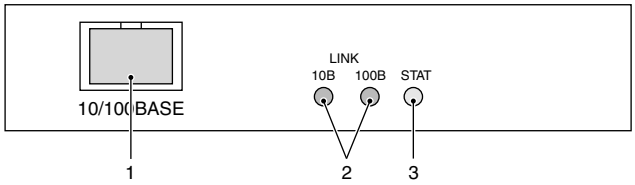
- For operations of HTTP, it is recommendable to use a WWW browser such as Internet Explore4.0 or later or Netscape Navigator4.0 or later. If another browser is used, it must at least conform to HTTP1.0 (RFC1945) or HTML2.0 (RFC1866).
- To use HTTP, the TCP/IP protocol setup of the AR-NC5J must be valid and the IP address of the AR-NC5J must be set.

2. Hardware specifications

CPU	FALCON 32bit RISC chip	
Memory	RAM	4Mbyte
	Flash ROM	1MByte
Network interface	10BASE-T/100BASE-TX	1 port (10/100BASE auto recognition)
Printer interface	Sharp's unique interface	
Other	LED lamp	Status 10Base LINK, 100Base LINK (3 pcs.)

[4] IDENTIFICATION OF EACH SECTION AND FUNCTIONS

1. Connector and LEDs



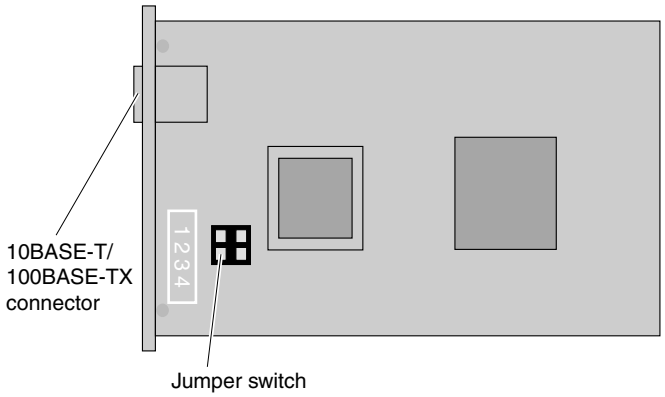
1	Connector for 10BASE-T/ 100BASE-TX	Connected with a shield-type, twisted-pair cable. (For 100BASE-TX environment, use a cable of Category 5.)
2	10BASE LINK LED (Green)	When a network connection is established in 10BASE-T, this lamp lights up.
	100BASE LINK LED (Green)	When a network connection is established in 100BASE-TX, this lamp lights up.
3	STATUS LED (Orange)	During communication, this lamp flashes.

<Status LED flashing cycle>

Content of operation	Lighting pattern	Cycle
Error detection	○—○— 0.2 sec	0.2sec/rapid flashing
Forcible loader mode	○—○— 1 sec	1sec/slow flashing Refer to [8]-4-(a).
Factory setup mode	○—○——— 0.6 sec	Repetition of 0.6sec/ 2times flashing

○ ON
— OFF

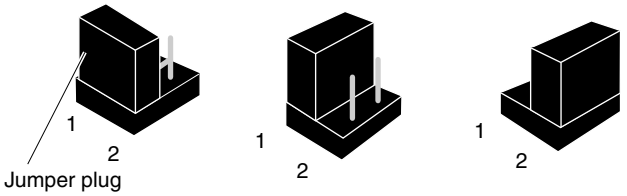
2. Jumper switches



The jumper switch has No. 1 and No. 2 pins, and ON/OFF is switched by the jumper plug.

When getting started, No. 1 pin is ON and the flash memory loader is started. When No. 2 is ON, the factory setting of the environmental variable is performed.

Jumper witch	ON	OFF
1	Forcible loader mode	Normal mode (When shipping)
2	Factory setup mode	Normal mode (When shipping)



Normal mode (When shipping) | Forcible loader mode | Factory setup

NOTE:

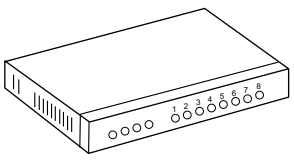
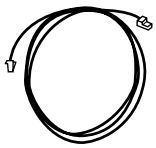
- When setting the jumper switch, be sure to turn off the power of the printer.
- For normal use, be sure to set No. 1 and No. 2 to OFF (Normal mode).
- The factory setup can be set by the utility or Telnet as well as the above jumper switch setup operations. Normally the utility or Telnet is used. Setting by the jumper switch is used only when the unit cannot make communication with the AR-NC5J.

[5] INSTALLATION

1. Connection to a network

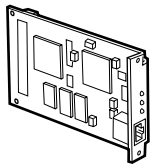
To connect the AR-NC5J to a network, the following items are required.

- For connection in the 100BASE-TX environment, a hub conforming to 100BASE-TX and a shield-type, twisted-pair cable (Category 5) are required.

	
Hub	Shield-type, twisted-pair cable

1) Check that the printer power is off, and connect the shield-type, twisted-pair cable to the 10/100BASE connector of the AR-NC5J.
2) Connect the other end of the cable to the hub.
3) Turn on the printer power, and check that the printer operates normally.

2. Parts included

		
Print server card: 1	Screws (silver) M3 x 8: 2	Spacers (unused): 2
CD-ROM: 1	Operation manual: 1	Installation manual: 1

3. Installation procedure

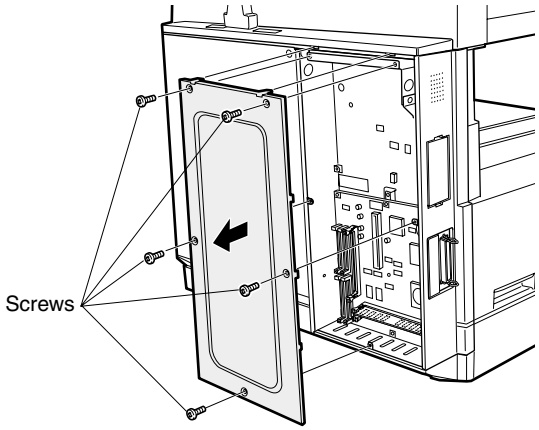
The AR-NC5J installing procedures in the AR-235/275 series are described.

In this case, no spacer is used in the packed items of the AR-NC5J.

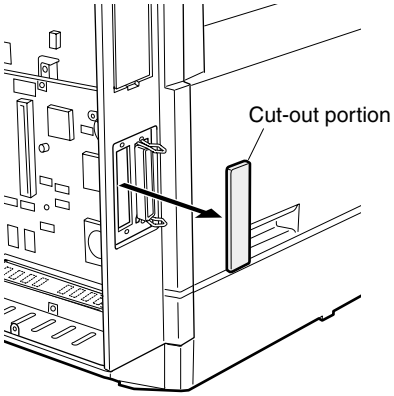
For the installing procedures of the AR-NC5J to another printer, refer to the printer's Service Manual or Installation Manual.

Turn off the main switch of the copier and then remove the power plug of the copier from the outlet.

1) Remove the shielding plate.
   Remove five screws and remove the shielding plate.

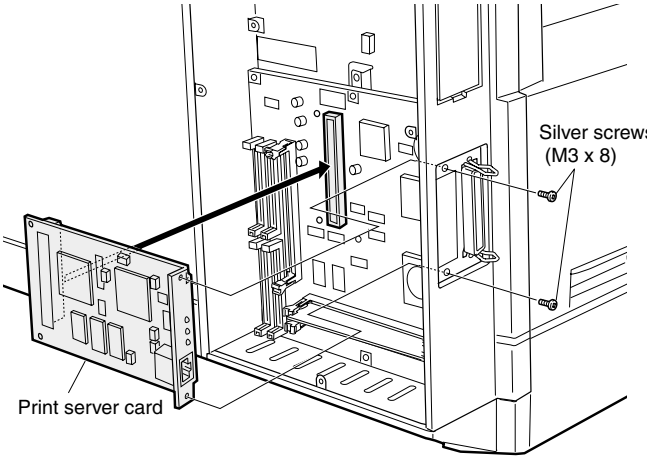


2) Cut and remove the cut-out portion from the left rear cabinet.
   Cut and remove the cut-out portion from the left rear cabinet using a tool such as nippers. (Be careful about the direction of the tool so that the cut surface is flat.)



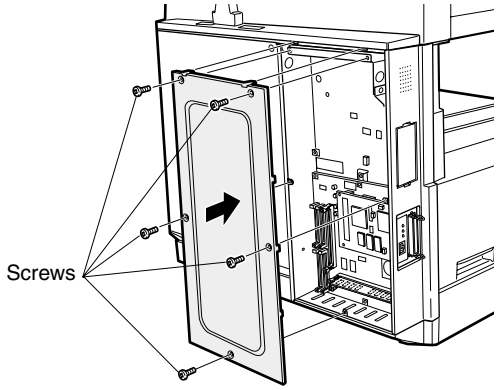
3) Attach the print server card.

Align the connector positions, connect the print server card, and then secure the card to the option mounting plate in the main unit using supplied two silver screws (M3 x 8).



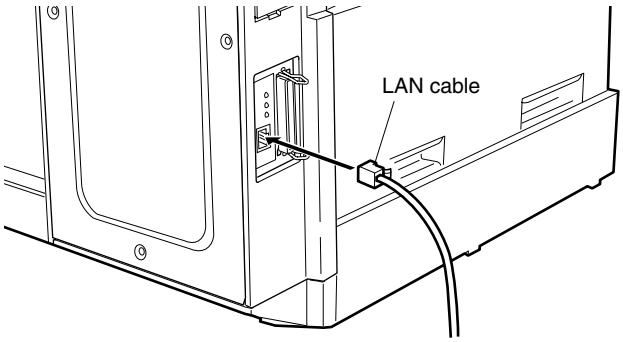
4) Reattach the shielding plate.

Reattach the shielding plate using five screws.



5) Connect the cable to the control PWB.

Connect a LAN cable to the connector of the print server card.



Insert the power plug of the copier to the outlet and turn on the main switch. Then, carry out the following procedure.

6) Check for the print server card.

Use the keys on the operation panel to print a configuration page. Check that the network interface card has been installed.

7) Check for printing.

Peform setup of the environmental variables. (refer to [6]-2)

(For installation of printer drivers on a computer and network settings (IP address input), see the supplied operation manual.)

Execute printing to check to see if printing can be executed properly.

[6] AR-NC5J STATUS CHECK

1. Printing the status page

The AR-NC5J status is checked by printing the status page.

A. Example of status page print

There are roughly two ways of printing the status page.

- Printing the status page is performed when starting the AR-NC5J.
  → Refer to the manual on the AR-NC5J setup.
- Perform printing of the status page from the operation panel of the printer.
  → Some printers may not support it. Refer to the Operation Manual of the printer.

* The same information as the status page print-out can be obtained from the utility Web page.

<Example of the status page>

```
Sharp AR-NC5J Version 1.0.0
Copyright(C) 2000 SHARP CORPORATION
Copyright(C) 2000 Japan Computer Industry Inc.

*** Network status report ***

[GENERAL]
model name          Sharp AR-NC5J
version             1.0.0
printer name
link status         100BASE-TX
duplex mode         HALF
Hardware addr       00:80:92:00:13:67
Status print        YES

[TCP/IP]
status              enabled
IP address          192.168.40.148
subnet mask         255.255.255.0
gateway             192.168.40.254

[NetWare]
status              enabled
packet type         802.2
network number      00000001
print mode          PSERVER
connected FS 0      EXACTION(Bindary)
NDS Tree            MH____
NDS context

[AppleTalk]
status              enabled
zone name           TEST01
type name           LaserWriter
object name         SC001367

[NetBEUI]
status              enabled
computer name       SC001367
workgroup name      Sharp-Printer
master browser      SC001367
```

2. AR-NC5J setup items

After completion of installation, perform setup of the environmental variables. Explanations on the variables are given below.

A. General

Name			Factory setup	Descriptions
Telnet	Web page	NIC Manager		
Change root Password	Change Admin password	Admin Password	Sharp	The administrator password of the AR-NC5J is set with ASCII character codes. This password is used for identification when changing setup by Telnet, a Web page, or a setup utility. Remark: Indicated as "*" for security.
Print status after Boot-up	Print status after Boot-up	Print status after Boot-up	NO	When booting the AR-NC5J, select whether to print the status page or not.

B. TCP/IP and related items

Name			Factory setup	Descriptions
Telnet	Web page	NIC Manager		
TCP/IP Protocol	TCP/IP Protocol	TCP/IP protocol is used.	ENABLE	Used to enable/disable TCP/IP protocol. This setup will affect the operations of LPR, FTP, TELNET, SNMP, HTTP, and the setup utility (for TCP/IP).
DHCP/BOOTP	DHCP/BOOTP	DHCP/BOOTP is used.	ENABLE	Used to enable/disable the operation of DHCP/BOOTP protocol. The DHCP/BOOTP protocol acquires an IP address from the DHCP server or the BOOTP server when booting. To set an IP address of the AR-NC5J, a DHCP server or a BOOTP server which has been properly set should be operating in the sub network. The AR-NC5J automatically recognizes DHCP and BOOTP, and employs as its address whichever replies to it first.
RARP	RARP	RARP is used.	ENABLE	Use to disable/enable the RARP protocol operation. The RARP protocol acquires an IP address from the RARP server. To set an IP address of the AR-NC5J by RARP, the RARP server which has been properly set should be operating in the sub network.
IP Address	IP Address	IP Address	0.0.0.0	Used to set an IP address of the AR-NC5J. The set value is in the form of decimal number of "xxx.xxx.xxx.xxx."
Subnet Mask	Subnet Mask	Subnet Mask	0.0.0.0	Used to set the subnet mask of the AR-NC5J. The set value is in the form of decimal number of "xxx.xxx.xxx.xxx." When "0.0.0.0" is set, this item is disabled, and the subnet mask corresponding to the IP address is automatically used.
Default Gateway	Default Gateway	Default Gateway	0.0.0.0	Used to set an IP address of the gateway. The set value is in the form of decimal number of "xxx.xxx.xxx.xxx." The gateway must exist in the same sub network as the AR-NC5J. When "0.0.0.0" is set, this item is disabled.
Use FTP/LPD Banner	Use FTP/LPD Banner	Use FTP/LPD Banner	NO	Used to set whether to output the banner page when printing with LPR or FTP.

C. NetWare and related items

Name			Factory setup	Descriptions
Telnet	Web page	NIC Manager		
Netware Protocol	Netware Protocol	Use Netware Protocol.	ENABLE	Used to disable/enable the NetWare protocol operation. This setup will affect the operations of the print server, the remote printer, and the setup utility (for IPX/SPX).
Frame Type	Frame Type	Frame Type	802.2	Used to set the default frame type which is used by the AR-NC5J. If the set frame type does not work, another frame type is automatically selected.
Operation Mode	Operation Mode	Operation Mode	PSERVER	Used to set the priority operation mode (print server/remote printer) of the AR-NC5J. If the set mode does not work, another mode is automatically selected and tried.
Printer Name	Printer Name	Printer Name	"SCxxxxxx-prn1" (xxxxxx is the lower 6 digits of Mac address.)	Used to set the printer name which is registered in the print server information in the NetWare server. This setup must be identical to the setup of the printer name registered in the NetWare server.
Print Server Name	Print Server Name	Print Server Name	"SCxxxxxx" (xxxxxx is the lower 6 digits of Mac address.)	Used to set the print server name when the AR-NC5J is booted in the print server mode. Since this setup is used as an identification element in a network with the NetWare protocol, it must be different from the other NetWare product names. It is used as the login name to log in the NetWare server.

Name			Factory setup	Descriptions
Telnet	Web page	NIC Manager		
Login Password	Login Password	Login Password	No (No password)	Used to set the password authenticated when the AR-NC5J logs in the file server as a print server. The password can be set in max. 31 characters. However, it is not recommendable to use Chinese characters and Katakana character in a password. When a password is set for the AR-NC5J, the same password must be set to the corresponding file server. (Setup of a password on the file server is made from "Print server information.") When connecting to two or more file servers, the same password must be set to all of them. *Note: The AR-NC5J uses a null character array for the default password. That is, even though a password is set to the AR-NC5J and no password is set to the print server information (a null character array is set), connection and printing are allowed. This, however, is an exceptional process. In the normal process, the password set to the AR-NC5J must be identical to that for the print server information.
Job Polling (sec)	Job Polling interval (sec)	Job Polling interval	4	Used to specify the time interval (sec) between job inquiries from the AR-NC5J to the filer server. Normally there is no need to change the default setup, 4sec.
Bindary Mode	Bindary Mode	Bindary setup	ENABLE	Used to disable/enable the bindary mode operation. When disabled, only the NDS mode operation is valid. This is set to DISABLE only when only the NDS mode is used.
FSERVER Name 1 – 8	File server name 1 – 8	Filer server name to be connected	""	Used to set the priority file server name with max. 31 characters. When operating in the print server mode, the file server specified in this setup is logged in. If this setup is empty, the AR-NC5J automatically retrieves a file server to log in.
NDS Tree	NDS Tree name	NDS Tree name	""	Used to set the NDS tree to be connected. Since it is automatically acquired, there is no need to set in normal cases. If there are two or more trees in a network, it must be set.
NDS Context	NDS Context	NDS Context	""	Used to set the NDS context connected in the print server mode. In this item, the context which formed the print server on the file server is set.
PSERVER Name 1 – 8	Print Server name 1 – 8	Print Server name to be connected	""	Used to set the print server name to be connected in priority. When operating in the remote printer mode, connection is made to the print server set in this setup. If this setup is empty, the AR-NC5J automatically retrieves a print server to connect.
Job Timeout (sec)	Job Timeout (sec)	Job Timeout	10	Used to set the timeout for the AR-NC5J to judge the completion of a job when operating in the remote printer mode. Usually the default value is used.

D. AppleTalk and related items

Name			Factory setup	Descriptions
Telnet	Web page	NIC Manager		
AppleTalk Protocol	AppleTalk Protocol	Use AppleTalk Protocol.	ENABLE	Used to disable/enable the AppleTalk protocol operation.
Zone Name	Zone Name	Zone Name	"*"	Used to set the zone name which the AR-NC5J belongs to. If this setup is "*", The AR-NC5J belongs to the default zone set in the AppleTalk router in the network.
Printer Name	Printer Name	Printer Name	"SCxxxxxx" (xxxxxx is the lower 6 digits of Mac address.)	Used to set the AppleTalk printer name. The set printer name is visible from the selector. The special codes (=:@*) of the AppleTalk protocol cannot be used in this character array.

E. NetBEUI and related items

Name			Factory setup	Descriptions
Telnet	Web page	NIC Manager		
NetBEUI Protocol	NetBEUI Protocol	Use NetBEUI Protocol.	ENABLE	Used to disable/enable the NetBEUI protocol operation.
Computer Name	Computer Name	Computer name	"SCxxxxxx" (xxxxxx is the lower 6 digits of Mac address.)	Used to set the computer name. The set name is displayed in Window's Explorer. The name must be different from the other computer names.
Work Group	Work Group	Work Group	"Sharp-Printer"	Used to set the work group which the AR-NC5J belongs to. Use the default work group name or an existing work group name. A new work group name which does not exist in the network cannot be displayed as a work group.
Comment	Comment	Comment	"Sharp AR-NC5J"	Used to set the comment on the AR-NC5J. The set contents are displayed as the comment on the AR-NC5J by Window's Explorer.

[7] TROUBLESHOOTING

1. Obstacles to introduction

A. Test print is not outputted.

Check that the printer is ready for printing. (Online/Offline, etc.)

Check that the data reception lamp of the printer is on. If it is on, turn it off and press the paper exit button to discharge paper.

2. Obstacles in Windows environments (TCP/IP)

A. NICManager retrieval cannot find out the AR-NC5J.

Check that the network cable is properly connected.

In the NICManager menu bar "Option", select "Search by TCP/IP" and perform retrieval.

B. Printing cannot be made.

Check that the network cable is properly connected.

When the TCP/IP protocol is used, check that there is a reply of ping for the IP address assigned to the AR-NC5J.

Check that the printer JOB lamp is on. If it is on, turn it off and press the paper exit button to discharge paper.

3. Obstacles in Windows environments (NetBEUI)

A. Work Group of "Sharp Printer" is not found in the entire network.

Check that the network group is properly connected.

Check the network setup of Windows.

It may take several minutes to find the work group in the network.

4. Obstacles in NetWare environments

A. NICManager retrieval cannot find out the AR-NC5J.

Check that the network cable is properly connected.

In the NICManager menu bar "Option", select "Search by IPX/SPX" and perform retrieval.

B. Cannot connect to the NetWare server in the remote printer mode.

Check that the packet type and the NetWare operation mode are proper.

The AR-NC5J switches automatically, however it may take some time depending on the use environment.

Check that the print server which the AR-NC5J is registered in is normally working in the NetWare server.

Check that the print server name is properly set. If the print server name registered in the AR-NC5J is specified, check that the print server name is identical to what is working on the file server.

Do not use a same port name in different products.

C. Cannot connect to the NetWare server in the print server mode.

Check that the packet type and the NetWare operation mode are proper.

The AR-NC5J switches automatically, however it may take some time depending on the use environment.

When a file server is specified to the AR-NC5J, check that the name of the file server which is used is identical to the set name.

Check that the printer port name is properly set. Check that the printer port name set to the AR-NC5J is identical to the printer port name set to the NetWare server. If there are two or more units of the AR-NC5J, do not use the same name for different AR-NC5J, and do not use the same port name for different ports.

Check that the NetWare login password is correct.

Check that the machine name is identical to the print server name.

D. Printing cannot be performed.

Check that the network cable is properly connected.

Check that the printer job lamp is on. If it is on, turn it off and press the paper exit button to discharge.

5. Obstacles in Macintosh environments

A. Not recognized with the selector.

Check that the network cable is properly connected.

When there is a zone in the network, check that the selector connects to the proper zone (which the printer is connected to) and check that the zone name is the same as what is set by a utility, etc.

Check that the printer conforming to the printer is selected.

Check that the AppleTalk indicated at the right lower side of the selector is set to "Use."

Check that "AppleTalk (*1) (Network)(*2) setup is proper to the use environment.

*1: In the case of AppleTalk

Check that "Ethernet" is selected. When an AppleTalk router is used to connect the AR-NC5J with LocalTalk, check that "Printer port" or "MODEM port" is selected.

*2: In the case of Network

Check that "Ethernet" is selected. When an AppleTalk router is used to connect the AR-NC5J with LocalTalk, check that "LocalTalk" is selected.

Print the setup contents and check that the AppleTalk protocol is not disabled. Setup can be made by using Telnet, Windows utility, or setup utility for Macintosh.

Print the setup content and check that the printer name is not empty.

B. When printing, "Insufficient memory" is displayed and printing cannot be made./When printing, only Chinese characters are printed or blank paper is outputted.

It may be caused by insufficient memory capacity for the application. Click the icon of the using application, select "See information" in the file menu, and increase the use memory size of the application.

Terminate the other applications which are acting.

Increase the starting disk capacity.

[8] FLASH ROM VERSION UP PROCEDURE

1. Operating environment

The version up tool requires the operating environment of Windows95/98/Me/NT/2000.

- In the Windows NT/2000 environment, communication is performed by use of the IPX/SPX protocol. So the IPX/SPX protocol must be installed.
- In the Windows 95/98/Me environment, both the packet driver and the IPX/SPX protocol are retrieved for use of communication, and an available communication means is used to perform uploading. (If both are available, the IPX/SPX protocol has priority.)

If the IPX/SPX protocol is available and there is a NetWare server in the environment, a network number may be obtained from the NetWare server to allow communication (retrieval and upload) with a print server card which is outside of the router. In the other environments, communication with a device outside the router cannot be made.

2. Making of execution environment

The version up tool is provided in a form of self-extracting compression files. You may extract necessary files in your desired folder without any special installing program.

For multi language use, the self-extracting file is provided in each language. The tool is not provided with a UI for selection of language.

In addition, one PC cannot operate two or more displays simultaneously.

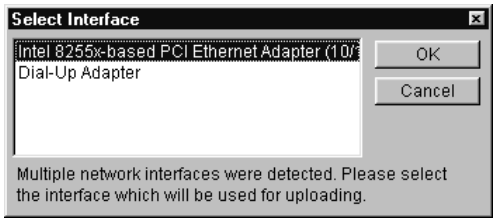
3. Procedures

A. Establishment of communication means

(In the case of Windows 95/98/Me)

When the tool is executed, if two or more network adapters are installed, the network adapter selection menu is displayed. Select the Ethernet network adapter in this menu and press the OK key, retrieval will be executed. If, however, initialization of the packet driver is failed with the selected network adapter, the machine returns to the network adapter selection menu. Pressing the CANCEL key terminates the tool operation.

When only one network adapter is installed, this selection menu is not displayed.


Select Interface
Intel 8255x-based PCI Ethernet Adapter (10/
Dial-Up Adapter
OK
Cancel
Multiple network interfaces were detected. Please select the interface which will be used for uploading.

Network adapter selection menu

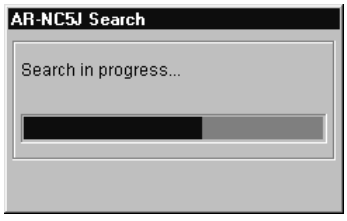
(In the case of Windows NT/2000)

When this tool is executed, installation of the IPX/SPX protocol is checked. If the IPX/SPX protocol is not installed, the error message is displayed and the tool is terminated. If installed, retrieval is performed.

Error
This program does not work in WindowsNT/2000 environment where IPX protocol is not installed.
Install IPX protocol or execute in Windows95/98/Me environment.
OK

IPX not-installed error message

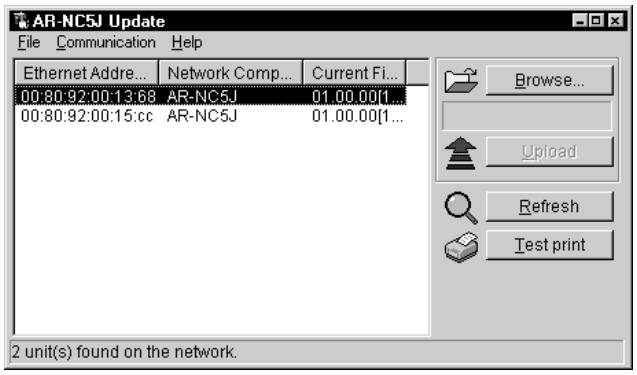
When the communication means is established, as described above, the tool retrieves for the AR-NC5J installed in the network. During retrieval, the process status bar is displayed.



Retrieval process status display

B. Main menu

When retrieval is completed, the main menu of the tool is displayed, and the list of retrieval results is displayed.



Main menu

Clicking the heading of the list changes the sort conditions.

When a BIN file name is selected, it is displayed in the column below the Browse button.

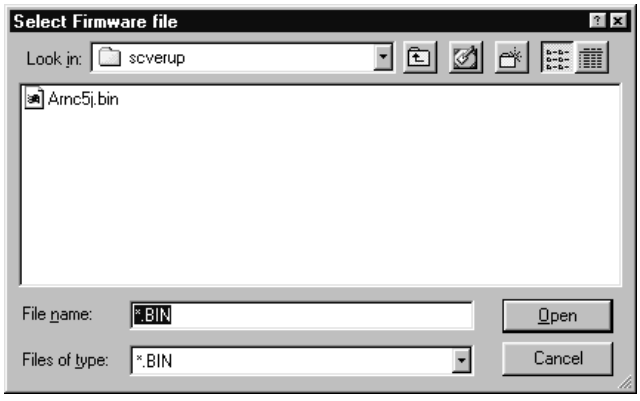
The menu is composed as shown in the table below. The names in [ ] show buttons of the same function on the main menu.

Group name	Sub menu name	Function
File	Open [Browse]	Displays the file selection dialog to select and change a BIN file to write into.
	Refresh [Refresh]	Retrieves a printer on the network and revises the list.
	Exit	Terminates the program.
Communication	Upload [Upload]	Starts writing of the Bin file to the selected printer.
	Test print [Test print]	Sends the test print command to the selected printer to perform test printing.
	Options	Opens the option setup dialog.
Help	About	Opens the version information display.

C. File selection dialog

In the main menu, select FILE a OPEN or press the Browse button, and the file selection dialog will be opened. Select a BIN file to write into the AR-NC5J.

If a BIN file which is not for the AR-NC5J is selected, an error occurs.



File selection dialog

D. Firmware upload

Select a desired printer from the list and a Bin file. Under this condition, select COMMUNCIATION a UPLOAD or press the UPLOAD button, and the firmware will be uploaded. There are following three patterns of writing procedures:

1) Single selection

When only one printer is selected from the list on the main menu:

First the upload start confirmation display is shown. Selecting YES in this menu deletes the firmware and starts uploading. During uploading, the process indication bar is displayed on the firmware upload menu.

After completion of uploading, the firmware upload menu is closed and the control returns to the main menu.

2) Plural selection (without confirmation)

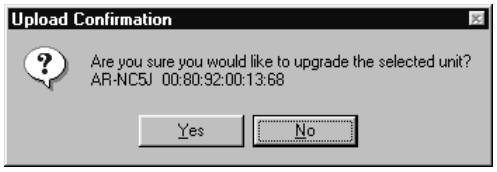
When two or more printers are selected from the list on the main menu, and a check mark is not put to "When uploading to multiple units, display a confirmation prompt for each unit."

In this case, the upload start confirmation menu is displayed only once when starting the first writing. Selecting YES in this menu starts writing the firmware to the selected printers continuously. The operations during and after writing are the same as "Single selection."

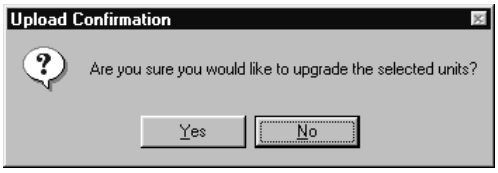
3) Plural selection (with confirmation)

When two or more printers are selected from the list on the main menu, and a check mark is put to "When uploading to multiple units, display a confirmation prompt for each unit."

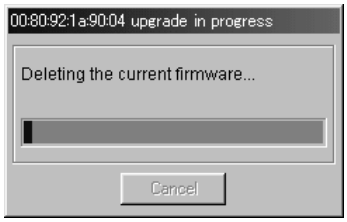
In this case, the upload start confirmation menu is displayed and delete/uploading of the firmware is made for each of the selected printers. (This series of operations is repeated for each printer.) If NO is selected in the confirmation menu, uploading is not performed and the control goes to the confirmation menu of the next printer. The operations during and after writing are the same as "Single selection."



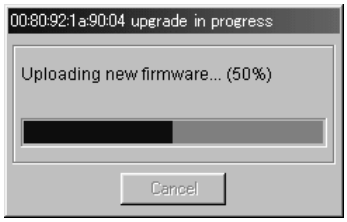
Upload start confirmation menu
(Single selection/Plural selection (with confirmation))



Upload start confirmation menu
(Plural selection (without confirmation))



Firmware delete menu



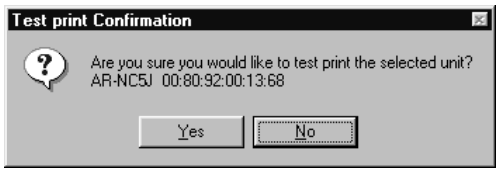
Firmware upload menu

E. Test print

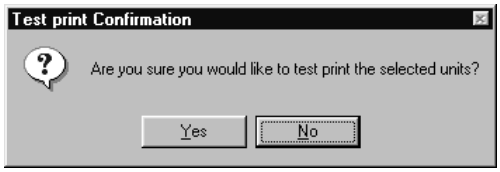
After selecting a desired printer from the list, select COMMUNICATION a TEST PRINT on the menu or press the TEST PRINT button, and the test print of the selected printer will be performed. This function is used for troubleshooting.

Similarly to the firmware uploading, there are three patterns: Single selection, Plural selection (without confirmation), and Plural selection (with confirmation).

If the test print packet that is sending fails, an error message is displayed. (Refer to "5. Error message list." In the case of normal completion, no message is displayed.



Test print confirmation menu
(Signal selection/Plural selection (with confirmation))



Test print confirmation menu
(Plural selection (without confirmation))

<Example of TEST PRINT>

```
Sharp AR-NC5J Version 01.00.01
Copyright(C) 2001 SHARP CORPORATION
Copyright(C) 2001 Japan Computer Industry Inc.

*** Diagnostic report ***
   ROM Check : Ok  stat: B744 FFFF 0000 0000
   RAM Check : Ok  stat: 0000 0000 0000 0000
   NIC Check : Ok  addr: 00:80:92:00:15:0F   100BASE-TX
EEPROM Check : Ok  stat: 7816 7816 0000 0000

      JUMP-1 : OFF(ON:Test use only)
      JUMP-2 : OFF(ON:Initialize configuration)
```

4. Notes during/after uploading

During and after uploading, take care of the following notes:

(a) During uploading, the printer power should not be turned off and the network cable should not be disconnected. If they should, uploading will not performed normally and the firmware will be broken.

If the firmware should be broken due to an accident during uploading, retrieval by the version up tool may not be responded. In such a case, reboot the printer with the jumper switch No. 1 at ON, and the network card will be booted in the forcible loader mode to make responding to retrieval.

This operation is performed similarly to both cases when the IPX/SPX protocol is used and when the packet driver is used. There are no limitations.

(b) When the composition of the setup information differs between different versions before and after uploading, the content of setup may be broken after completion of uploading. (This information will be given with version-up bin file.)

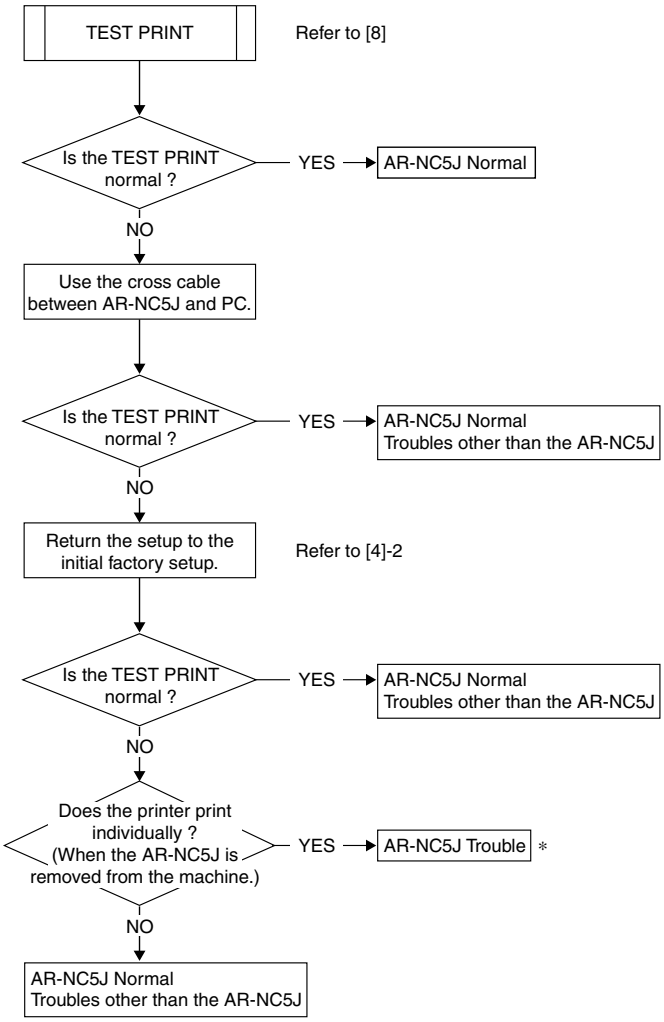
In such a case, the setup shadd be returned to the initial factory setup. Then use the setup tool and a Web browser to make setup again.

5. Error message list

The table below shows the error messages list of the version up tool.

Error message	Occurring conditions
Invalid firmware file. Select a correct file.	The Bin file of the selected firmware was improper. (Example: A BIN file of other unit than the AR-NC5J was selected.)
Can't operate more than 32 units at the same time.	Printers of over 32 units were selected and Uploading or test print was performed
Upload failed.	A communication error occurred during uploading.
Failed starting communication with XX:XX:XX:XX:XX:XX.	Immediately after completion of firmware uploading, the printer could not enter the loader mode.
No response after sending the commands to XX:XX:XX:XX:XX:XX.	After sending the test print command, there was no response from the AR-NC5J.
Timeout time is not available.	A value other than 1 - 99 or a character is entered for time out setup.
Failed to initialize packet driver.	Initialization of the packet driver failed when a single network adapter was installed under Win95/98/Me environment.
Failed to initialize packet driver. Do you want to use other network adapter?	Initialization of the packet driver failed in an adapter after selecting the adapter when plural network adapters were installed under Win95/98/Me environment.
This program does not work in WindowsNT/2000 environment where IPX protocol is not installed. Install IPX protocol or execute in Windows95/98/Me environment.	The version up tool was executed under Windows NT/2000 without installing the IPX/SPX protocol.

6. Check for defectiveness of the AR-NC5J



* If there is another printer than those which conform to the AR-NC5J, install the AR-NC5J to be checked, and perform the same procedures to check.

CAUTION FOR BATTERY REPLACEMENT

(Danish) ADVARSEL !

Lithiumbatteri – Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri
af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandoren.

(English) Caution !

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type
recommended by the manufacturer.

"BATTERY DISPOSAL"
CONTAINS MANGANESE DIOXIDE LITHIUM BATTERY
MUST BE DISPOSED OF PROPERLY.
REMOVE THE BATTERY FROM THE PRODUCT AND
CONTACT FEDERAL OR STATE ENVIRONMENTAL
AGENCIES FOR INFORMATION ON RECYCLING
AND DISPOSAL OPTIONS.

"BATTERY DISPOSAL"
CONTAINS LITHIUM-ION BATTERY.
MUST BE DISPOSED OF PROPERLY.
REMOVE THE BATTERY FROM THE PRODUCT AND
CONTACT FEDERAL OR STATE ENVIRONMENTAL
AGENCIES FOR INFORMATION ON RECYCLING
AND DISPOSAL OPTIONS.

(Finnish) VAROITUS

Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan
tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden
mukaisesti.

(French) ATTENTION

Il y a danger d'explosion s' il y a remplacement incorrect
de la batterie. Remplacer uniquement avec une batterie du
même type ou d'un type équivalent recommandé par
le constructeur.
Mettre au rebut les batteries usagées conformément aux
instructions du fabricant.

(Swedish) VARNING

Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent
typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens
instruktion.

(German) Achtung

Explosionsgefahr bei Verwendung inkorrekter Batterien.
Als Ersatzbatterien dürfen nur Batterien vom gleichen Typ oder
vom Hersteller empfohlene Batterien verwendet werden.
Entsorgung der gebrauchten Batterien nur nach den vom
Hersteller angegebenen Anweisungen.

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